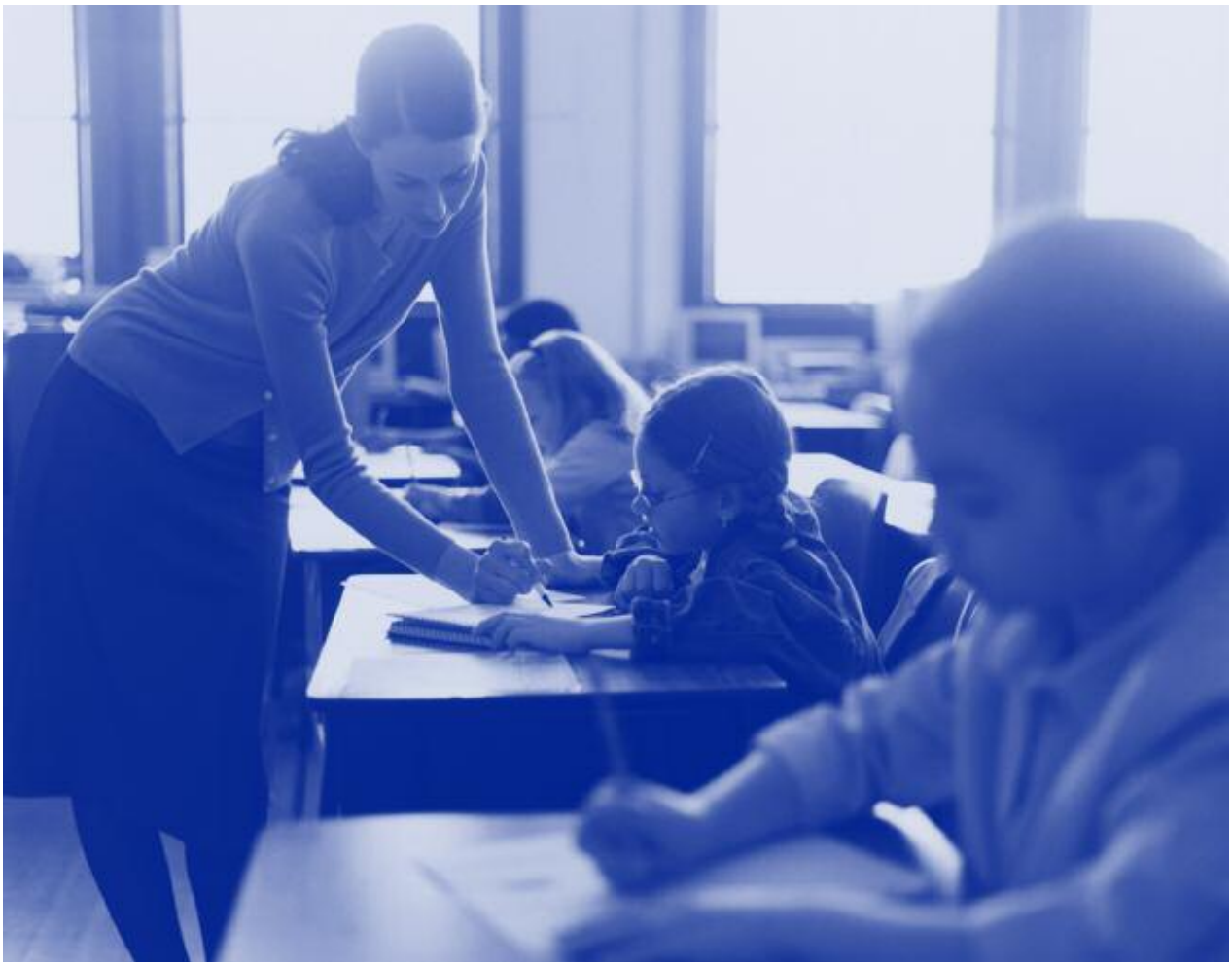
REACHING CAPACITY:

A Blueprint for the State Role in Improving Low Performing Schools and Districts



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Dear Friends,

My colleagues and I are proud to present you with our report entitled *Reaching Capacity: A Blueprint for the State Role in Improving Low Performing Schools and Districts*.

This report offers a response to the challenges the state now faces in turning around failing schools and districts. We see this as the most urgent area of education policy making in the Commonwealth. The federal No Child Left Behind Act has required states to label more and more schools and districts as "underperforming", then the Act explicitly mandates that states provide them remediation. Further, the recent Supreme Judicial Court ruling in the case of *Hancock v. Driscoll* reaffirmed that the state must continue the press of education reform and that the Board and Department of Education, along with the Legislature, must take responsibility for shaping the future reform agenda, including specific attention to locations in which significant numbers of students are not meeting the standards. The next imperative of education reform is determining the Commonwealth's role in helping school systems boost performance so that all students achieve high educational goals. The focus of this work is equity.

For a dozen years, the Commonwealth of Massachusetts has prioritized the reform of elementary and secondary education. Billions of dollars have been poured into schools, and the state's commitment to financing public education has dramatically increased. State government has assumed, under the terms of the Education Reform Act of 1993, a leadership role in setting standards for student learning, assessing the performance of students, schools and districts and holding the various parties accountable for their contributions to the achievement of high learning standards for all children.

What has been arguably neglected in the reform movement has been attention to the role of the state. The working premise behind this report is that the Commonwealth is now responsible for setting high educational standards for all and enforcing those standards. Yet, in order for the Commonwealth to hold students, educators and local leaders responsible for making strong progress toward the state's educational goals, it has an obligation to provide the necessary leadership, support, training, technical assistance and capacity building interventions to enable teachers, schools and districts to meet the ambitious, new reform goals. My colleague, Richard Elmore, has persuasively argued that for each additional increment of accountability that policy-makers demand, they must provide an equal measure of capacity building assistance to enable educators to meet the higher level of demand.

But what do we mean by building capacity at the state and local level? That is the question that our report is designed to answer. We sought to discover what a "fully capacitated" state education function might look like and cost. We looked around the world and around the country. Clearly, Massachusetts is not alone in the need to meet the challenge of investing in state capacity to do the new, state-led work of education reform. Although we found particular examples of effective state practice, we did not find a "model", fully built state education agency anywhere in the country.

We differentiated between a state education function and the state Department of Education (DOE). There are functions that may be the responsibility of the state, initiated at the state level and contracted out to wide range of providers. The Massachusetts DOE, like its counterpart state education agencies across the country, has historically been a compliance organization. It has a relatively small staff, a limited budget and little constituency support. However, the Massachusetts DOE has been moving, over the past dozen years, from compliance to leadership and support functions, yet it has not received the resources and support it needs to do its expanded job under education reform. This report urges change within the DOE and the broader state education infrastructure.

We hope you find our report interesting and provocative.

S. Paul Reville
Executive Director

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I. INTRODUCTION

The Massachusetts Education Reform Act (MERA) of 1993 sparked an unprecedented era of reform activity in schools and districts that continues to this day. Over the past decade, the state has more than doubled its local aid to schools and districts,[1] and held local entities accountable by creating standards and assessments on which the progress of all students is measured. Massachusetts' standards and assessments have become national models of rigor and quality,[2] and evidence from national exams such as the Scholastic Aptitude Test (SAT) and National Assessment of Educational Progress (NAEP) shows that students of the Commonwealth regularly perform at or near the top of comparisons across states.[3] However, these indications that the state has made strides in creating and enforcing high standards do not account for the unevenness in the outcomes of education reform in Massachusetts.

A strong standards and assessment system is the foundation of a system of accountability for schools and districts, yet a complete accountability system must go further to include support and guidance for schools and districts that fail to meet their goals. Today, large numbers of schools and districts are being identified for inadequate student performance, both through our state system and through federal requirements under the No Child Left Behind Act. The growing volume of schools and districts identified as low performing draws attention to a weakness in the enactment of MERA: *The state's heavy and sustained investment in the development of standards and assessments has not been paired with a commensurate investment in developing the capacity of teachers and educational leaders at the school, district and state levels, to meet the challenges of educating all students to a higher standard.*

The purpose of this report is to clarify the state's role in helping schools and districts address their needs. This report begins from the premise that the state has an obligation that it is not meeting. Schools and districts—disproportionately those that serve low-income and non-white students—are struggling and need tools, resources and assistance to raise student achievement. Evidence from the past decade demonstrates that adding unrestricted funding is an insufficient remedy to the problem of chronic low performance. Both in Massachusetts and nationally, there is limited knowledge about how to educate poor and diverse students well at scale. Yet, this is the challenge that stands as the unfinished business of education reform in the Commonwealth, and this is the challenge that remains in completing an equitable and enforceable accountability system in which all students have equal opportunities to learn.

THE STATE'S HEAVY AND SUSTAINED INVESTMENT IN THE DEVELOPMENT OF STANDARDS AND ASSESSMENTS HAS NOT BEEN MATCHED IN DEVELOPING THE CAPACITY OF TEACHERS AND EDUCATIONAL LEADERS.

A dozen years into education reform and on the heels of a major education finance court case in Massachusetts, this report is issued at a time when many in the state are envisioning sweeping change for all aspects of the education system—from expansion of charter schools, to revisions to

1. http://finance1.doe.mass.edu/doe_budget/
2. Klein, D., Braams, B.J., Parker, T., Quirk, W., Schmid, W., Wilson, W.S., Finn, C.E., Torres, J., Braden, L, and Rami, R.A. (2005). The state of state math standards 2005. Washington, D.C.: The Thomas B. Fordham Foundation; Stotsky, S. and Finn, C.E. (2005). The state of state English standards 2005. Washington, D.C.: The Thomas B. Fordham Foundation.
3. See http://nces.ed.gov/nationsreportcard/ and http://www.doe.mass.edu/news/news.asp?id=2052

the foundation budget on which school funding is calculated, to changes in collective bargaining agreements. *This report examines a narrower slice of the system—the state role—and contributes a research-based analysis.* Both No Child Left Behind and MERA specify a state role in supporting low performing districts that is not being met. Regardless of possible changes in funding or governance at the school and district levels, inadequacies at the state level must be addressed. We have tried to envision state capacity in a way that would serve public schools regardless of which set of other policy changes are ultimately adopted.

Our Assumptions about Accountability and the Role of the State

We begin by stating a few of the assumptions that we held from the outset of this research. The following four themes framed our data collection and analysis.

THE STATE IS ULTIMATELY RESPONSIBLE FOR BUILDING THE SKILLS OF TEACHERS AND ADMINISTRATORS TO CREATE GREATER EQUITY OF OPPORTUNITY.

The "tight-loose" model of education reform has not worked well in many poor and urban districts. When the 1993 Education Reform Act was written, the expectation was that the state simply needed to be "tight" on setting standards and providing incentives, and that it could remain "loose" in allowing individual districts to plot their own course toward meeting the standards. However, the fact that so many schools and districts are being identified as low performing, more than a decade into the reform, is evidence that some are unable to enact the necessary changes without guidance. In fact, our research demonstrates that many districts would like additional support in determining high quality curricular materials and professional development and in analyzing data.

The logic of standards-based accountability demands a larger state leadership role in the work of schools and districts. If the state expects to hold schools and districts accountable for changed teacher practice and improved student learning, state leaders must be responsible for developing in schools and districts the capacity to improve student learning. "When accountability systems require that schools perform at levels that exceed their current capacity, the authority of those systems and the people who run them is diminished".[4] If the state is going to label schools and districts as underperforming, the state is ultimately responsible (1) for ensuring that all students have equitable opportunities to meet standards it sets and (2) for building the skills of teachers and administrators to create greater equity of opportunity. The state set high standards for student performance and, thus, must be accountable for building the capacity of local entities to reach those standards.

Support must mean more than financial support. One of the key successes of MERA 1993 has been the level of continued funding for education reform. The budget of every district in the state is at or above the state's established foundation budget level. Massachusetts ranks fourth in the nation in per pupil spending. Perhaps most important, Massachusetts has been recognized for having the most progressive funding formula in the nation. While most states provide lesser financial resources to poor and minority schools, Massachusetts spends substantially more (an average of $1,343 more[5]) in the

4. Elmore, R.F. (2004). Doing the right thing and knowing the right thing to do. In Elmore, R.F. (Ed.) School reform from the inside out: Policy, practice and performance. Cambridge, MA: Harvard Education Press.

5. Carey, K. (2004). The funding gap: Low-income and minority students still receive fewer dollars in many states. Washington, DC: The Education Trust.

poorest 25% of districts.[6] Despite the monumental infusion of money to local entities, too many schools and districts are struggling, and achievement gaps between rich and poor, and white and non-white students persist. Thus, it follows that funding alone must have been insufficient.

"The state" must mean more than the Department of Education. While the Department of Education (DOE) needs to play a leadership role in reorganizing the state system toward a greater focus on instructional and student learning, the scope of the work is more than that entity can accomplish alone. Increasing state capacity does not mean radically expanding state bureaucracy. It means clarifying the roles of various government entities such as the DOE, the Board of Education (BOE), the Office of Educational Quality and Accountability (EQA) and the legislative and executive branches. It also increasingly entails drawing on the expertise of external partners such as universities, intermediary educational organizations and individual consultants. Any reference to "the state" in this report encompasses this broad spectrum of actors.

Research Purpose and Design

The purpose of this report is to provide an analysis of the state's support and leadership capacity, particularly with respect to low performing schools and districts. Our primary research question was: *What are the components needed in a state system to support low performing schools and districts?* Because the project was executed in the context of a real-time policy problem, we have attempted to frame our analysis in terms of what is politically and financially reasonable.

DEFINING KEY TERMS

DOE	State Department of Education. Entity responsible for "ensuring improved teaching and learning in all of the Commonwealth's schools."[7]
BOE	Board of Education. Board that oversees state education policy and DOE operations.
EQA	Office of Educational Quality and Accountability. State office, independent of DOE, responsible for "reviewing and evaluating the effectiveness and efficiency of public school districts."[8]
EMAC	Educational Management Audit Council. Board that oversees EQA operations.
MERA	The Massachusetts Education Reform Act of 1993. Omnibus legislation, which mandated statewide reform of the education system and dictated the terms of that reform.
NCLB	The No Child Left Behind Act. Federal legislation, passed in 2001, which holds schools, districts and states accountable for the performance of all students.
AYP	Adequate Yearly Progress. Federal benchmark based on state test results and state-established standards for what constitutes proficiency. Schools, districts and states are evaluated on whether they make AYP overall and for each subgroup of students.

Currently in Massachusetts, the issue of how to improve low performing schools and districts has gained considerable public attention as a function of:

- **Federal Action.** The federal No Child Left Behind Act holds states accountable for ensuring adequate yearly progress in schools and districts and requires state intervention in chronically underperforming locales, the number of which are continually growing;

- **State Action.** The *Governor's Task Force on State Intervention in Underperforming Districts* signaled the primacy of this issue at the state's top government office. Also, over the past couple of years, the EQA office developed a system for district review and rapidly scaled up the number of districts that it has capacity to examine each year.

6. While the state contributes more funding to economically disadvantaged districts than it does to affluent districts, some affluent districts contribute so much more in local aid that they still outspend economically disadvantaged districts overall.
7. http://www.doe.mass.edu/welcome
8. http://www.doe.mass.edu/sda/eqa

- **Court Action.** The court case, *Hancock v. Driscoll,* in which nineteen low-income plaintiff districts claimed their students' opportunities to learn were inferior to those of students from more affluent districts, drew attention to the role of the larger system in building the capacity of schools and districts. The court acknowledged that the state needed to continue on an aggressive schedule of implementing education reform and that it needed to keep expanding its efforts to intervene in underperforming schools and districts.

This level of visibility creates a policy opportunity to examine the state's capacity and contribute a data-driven analysis.

INCREASING STATE CAPACITY DOES NOT MEAN RADICALLY EXPANDING STATE BUREAUCRACY, BUT RATHER CLARIFYING THE ROLES OF VARIOUS GOVERNMENT ENTITIES AND DRAWING ON THE EXPERIENCE OF EXTERNAL PARTNERS.

We began this project by gathering expert opinion from various constituencies to help inform our work. We collected archival documents and conducted 55 face-to-face interviews in Massachusetts with principals, superintendents, DOE and EQA staff, and other members of the state education policy community. These include:

- **Local School District Interviews.** About half of all interviews were of school and central office leaders in local school districts. We over-sampled low performing schools and districts, but included a small comparison group of higher performing schools and districts with similar demographics.

- **State-Level Interviews.** The other half of the interviews were conducted with state-level actors, including senior staff at the DOE and the EQA.

- **Document Analysis.** Examples of documents collected include: Chapter 70 and DOE administrative budgets 1993-2004; DOE salary schedules and personnel counts; the DOE strategic plan; EMAC annual report 2004; planning documents from DOE's accountability and targeted assistance cluster as well as EQA.

To supplement our in-state research, we used multiple methods to review how other states and other nations support and intervene in struggling schools and districts.

- **Research in Other States.** Phone and in-person interviews were conducted with officials from five state departments of education that have been recognized for their intervention efforts in low performing schools and districts.

- **International Research.** We interviewed several experts in international education about the practices of education ministries abroad.

- **Literature and Web Review.** As a final means of ensuring a comprehensive effort, we collected and analyzed several dozen recent research articles and reports on school and district intervention, the state role, and capacity-building strategies. We also examined the web sites of all fifty state departments of education for information about intervention programs and the organization of the departments.

It is important to note that while the contributions of all interviewees were valuable in shaping the report, the Rennie Center is solely responsible for framing the issue as it is presented here and for the content of all conclusions and recommendations.

II. THE PUSH TOWARD PROFICIENCY: MEETING THE NEEDS OF SCHOOLS AND DISTRICTS

Under No Child Left Behind, Massachusetts' explicit achievement goal is to get all students to score at the "proficient" level or above on the Massachusetts Comprehensive Assessment System (MCAS) exam. In the seven years that the test has been administered, aggregate student scores in both English Language Arts (ELA) and math at all grade levels have consistently improved, but the greatest growth thus far has been in moving students from the "failing" to the "needs improvement" category. Statewide proficiency across grade levels is generally slightly above 50% in ELA and slightly below 50% in math, and proficiency rates are dramatically lower in urban centers.[9]

Given this presently unmet goal of proficiency, we set out to determine the needs and shortcomings in the current system by asking superintendents and principals questions such as: *What services, if any, would you need to add, expand or improve to get all students to proficiency?* and *How could the state help you to improve student learning?* (State officials and policy makers responded to similar questions about their perceptions of school and district needs.) While responses were far-ranging, they did converge around some specific patterns which helped us to define the content of the problem the state faces in improving its support capacity. This section serves as a summary of the problem, and the categories herein will be revisited in later sections that describe an ideal-type, full-capacity state and propose recommendations for action and change by state government. The categories include three domains in which

FIGURE 1. Percent of all students NOT achieving proficiency in 1998 and 2003

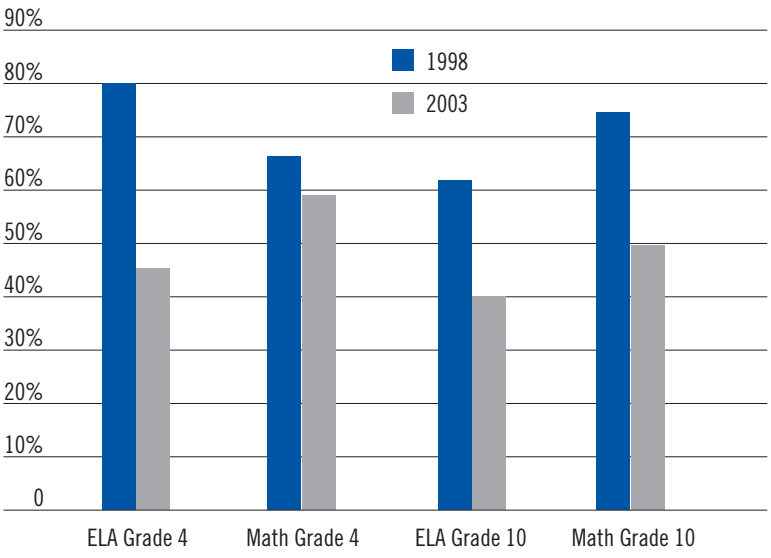
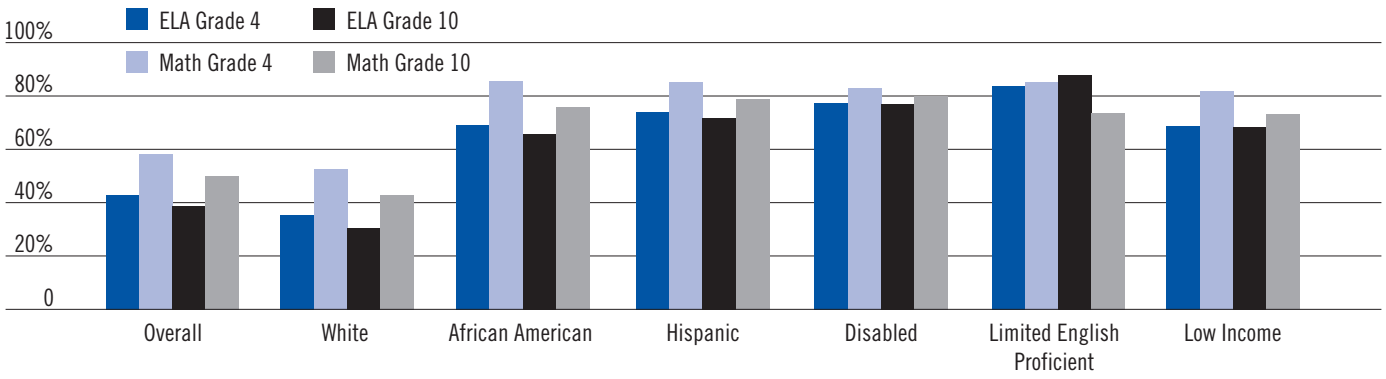


FIGURE 2. Percent of students NOT achieving proficiency in 2003 by demographic category



9. For example, of the eight tests administered in ELA and math, students in Lawrence only score above 25% proficiency on the Grade 7 ELA exam. Springfield does not score above 25% proficiency on math exams at any grade level.

districts need additional *technical assistance*:

- Curriculum and professional development
- Data and assessment
- Leadership

and one additional domain in which districts need financial and structural support—*expanding time on learning*. When we refer to "building capacity", it is in these specific domains.

Schools and districts need *technical assistance* to overcome some of the most challenging aspects of the implementation of education reform. In the years since the 1993 Act passed, schools and districts have experimented with new instructional programs, teaching methods, and organizational arrangements. Yet, for many, this has not produced adequate improvement in test scores. Urban leaders in struggling districts, in particular, recognized that there is no proven formula for turning around persistently failing schools and that they need help in constantly updating teachers' skills, cultivating leaders, evaluating curricular materials and analyzing data. Technical assistance is a broad category that includes expanding some things the state is already doing, as well as developing new tools and strategies for use in the field. We focus on the three dimensions of technical assistance that interviewees identified as the greatest capacity-building needs of the state.

DISTRICTS NEED ADDITIONAL TECHNICAL ASSISTANCE IN THREE DOMAINS:
• CURRICULUM AND PROFESSIONAL DEVELOPMENT
• DATA AND ASSESSMENT
• LEADERSHIP

In identifying areas in which districts need support, we must clarify that leaders have had variable experiences with the clusters/divisions within DOE. Many are skeptical of DOE's ability to provide technical assistance, especially given current capacity. When discussing the need areas outlined below, district leaders often described a desire to work with private partners (e.g. universities or independent professional development providers) or to develop their own instructional coaches and experts. Higher performing districts with established professional development programs seemed most resistant to working with DOE, whereas several of the lowest performing districts seemed most receptive to the help of any able outsider.

Curriculum and Professional Development

The need to improve teacher practice and ensure that teaching is aligned to standards rates as a top concern of principals, superintendents, state officials and policy makers. It is an enduring and complicated challenge, even a decade into education reform. Comparisons to other state departments of education are frequently invoked in discussions of the Commonwealth's capacity to provide professional development to schools. While DOE does provide some professional development opportunities, such as the summer content institutes, internal department knowledge of curricular content is generally seen to be minimal, and the scope of professional development offerings coming from the state is perceived as narrow. Superintendents and principals are eager for additional sources of low-cost, high-quality professional development in the following:

- Domains of the curriculum frameworks, especially math;
- Strategies for special education students in academic content areas;
- Strategies for English language learners in academic content areas; and

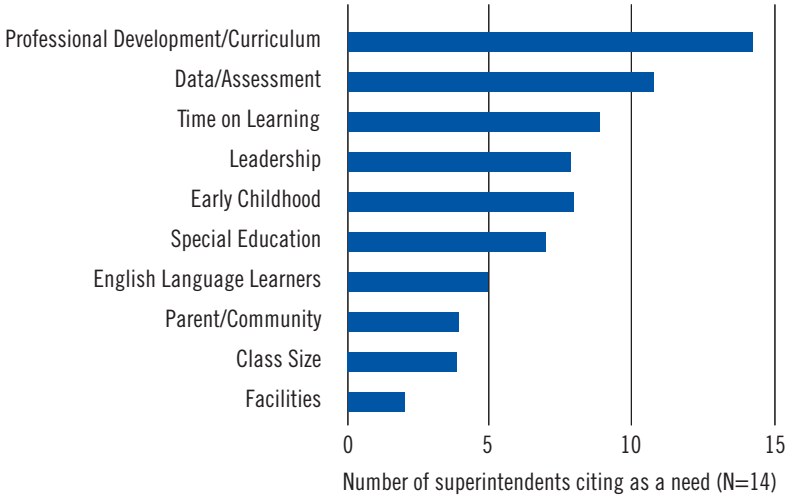
- Use of test data for instructional improvement.

Several policy experts who had observed multiple low performing schools noted a frequent lack of tools to support teaching of the curriculum frameworks such as curricular mapping documents, planned scope and sequence, and tailored instructional resources.[10]

Another possible impediment to the delivery of a strong, standards-based curriculum was raised in interviews, and it related to the selection of texts and instructional programs. The Education Reform Act of 1993 permitted districts a high degree of local control over the process of organizing schools, selecting materials, and allocating resources to meet state standards. Throughout the 1990's, it was common, for example, for individual schools to select their literacy program independent of the input of the central office or other schools. However, as MCAS results began to distinguish which programs were leading to student success, superintendents began centralizing curricular decisions and limiting options, often moving to a single literacy or math program district wide.[11] While superintendents (and especially principals) are wary of relocating decisions about curricular programs to the state level, many superintendents acknowledge that they would benefit from guidance from the DOE in areas such as:

- Identifying textbook and curricular program options that are aligned to state standards, and
- Providing reviews of the research on different texts and programs so that districts can make better-informed decisions.

FIGURE 3. Responses of superintendents when asked what services they would need to add, expand or improve to get all students to proficiency.



The policy community and state officials generally recognize that many districts were not equipped to take advantage of the curricular autonomy offered in 1993, and they endorse a greater state role in curriculum.

SUPERINTENDENTS AND PRINCIPALS ARE EAGER FOR LOW-COST, HIGH-QUALITY PROFESSIONAL DEVELOPMENT TO IMPROVE INSTRUCTION OF SPECIAL EDUCATION STUDENTS AND ENGLISH LANGUAGE LEARNERS, AMONG OTHER THINGS.

Assessment and Data

Among all groups of interviewees, there is widespread endorsement of the MCAS as a mechanism for school and district accountability. However,

10. To clarify, the Curriculum Frameworks delineate learning standards by subject area and grade. However, they do not tell teachers how or what to teach in order to meet that standard or how to organize their work in order to cover the breadth of the standards over the course of the year. Supplementary materials like curricular maps, which "map" where standards are covered in a text, and pacing guides, which provide teachers a timeline for covering the standards, are essential aids.
11. The majority of superintendents whose schools participate in the federal Reading First program report that teachers quickly shed their resistance to its structured curriculum because they see results in assessments.

while MCAS is viewed as a valid instrument for measuring the annual progress of schools and districts, it is seen as limited in that it does little to help teachers and schools plan specific, timely improvement strategies. The problem is: districts and schools receive the results from the spring MCAS administration the following fall, at which point teachers have a new set of students, presumably with a learning profile that differs from their previous class. It is becoming increasingly clear that teachers need diagnostic tools to help them determine the skills of current *individual students*, in *specific dimensions* of reading and math, at *regular intervals* (e.g. quarterly). Only then will the conditions exist to allow teachers to tailor instructional decisions to current student needs. In order to help students succeed on MCAS, teachers need formative data from MCAS-aligned mini-assessments that are administered periodically throughout the year.

EDUCATORS NEED DIAGNOSTIC TOOLS TO DETERMINE THE SKILLS OF CURRENT STUDENTS AT REGULAR INTERVALS.

There is a second limitation of the MCAS as a tool for facilitating improvement and making judgments about which schools and districts are making adequate progress. The current system does not allow for measurement of the growth of individual students' performance over time. District and school growth is determined by comparing the 2004-05 fourth grade class to the 2003-04 fourth grade class, rather than by comparing the 2004-05 fourth grade class to its scores a year earlier as the 2003-04 third grade class. The system is not equipped to track individual students from year-to-year and provide a growth-based analysis. This is viewed as a particular problem in urban districts with high mobility rates. Urban superintendents argue that their progress with students who are stable in the system is much higher than their overall scores suggest and conclude that they are being penalized for the lack of achievement demonstrated by students who have only been in their schools for a period of weeks or months. Several who have investigated alternative accountability structures being used in other states urge the implementation of a value-added, growth-based accountability system (a concept which is elaborated further in Section V).

Leadership

A third key area that emerged as one in which schools and districts are lacking capacity is leadership. Volumes of research on schools and districts say that effective organizations are characterized by a clear vision and skilled leaders.[12] Yet, superintendents in urban districts note a persistent difficulty in finding instructional leaders for the central office and schools, and they express skepticism that new administrators are getting the training they need to operate in today's urban schools. Expanding leadership capacity would include:

- Improving administrative training programs and clarifying the skills and knowledge needed to succeed in an urban leadership position;
- Developing mechanisms to cultivate leaders with instructional expertise from within the system;
- Distributing leadership to teachers in an effort to retain and challenge them; and
- Allowing principals more authority in choosing their staff.

12. See Elmore, R.F. (2000). Building a new structure for school leadership. Washington, D.C.: The Albert Shanker Institute; Fullan, M. (2005). Leadership and sustainability: System thinkers in action. Thousand Oaks, CA: Corwin Press.

DOE, in partnership with a handful of districts around the state, is beginning to address administrative leadership capacity through a grant from the Wallace Foundation, though this work has yet to impact most districts.

In Massachusetts, the large number of very small districts creates an ongoing leadership dilemma. Small districts cannot afford the professional staff to handle the diversity of functions expected of the modern central office, such as curriculum, assessment, professional development, research and data analysis, and managing compliance requirements to the state and federal government. And staffing an additional administrative position would inevitably result in cutting a teaching position.

Leadership also involves enacting a unified vision throughout a district. DOE and EQA reviews are designed to serve as a starting point in helping schools and districts determine a focused trajectory for improvement. In fact, many school and district leaders describe the DOE Performance Improvement Mapping process as helpful in getting them to clarify and narrow goals. However, these review processes are relatively new, and suggestions for improvement include:

- The state must build capacity to conduct reviews in more locations.

- The data collection process needs to be streamlined. Currently, reviews (specifically the EQA reviews) are characterized as cumbersome and too time-consuming. Districts and schools are often required to participate in multiple reviews in the same year.

- The documentation that results from the review process, particularly the EQA process, is not usually viewed as useful. Hence, educators endure the process as a compliance exercise rather than welcoming it as a learning opportunity.

Reviews need to move beyond planning and help districts and schools address their deficiencies in curriculum, professional development, assessment, budgeting, etc. The challenge lies in expanding the review process while making it more useful and less cumbersome.

STATE REVIEWS NEED TO MOVE BEYOND PLANNING AND HELP DISTRICTS AND SCHOOLS ADDRESS THEIR DEFICIENCIES IN CURRICULUM, PROFESSIONAL DEVELOPMENT, ASSESSMENT AND BUDGETING.

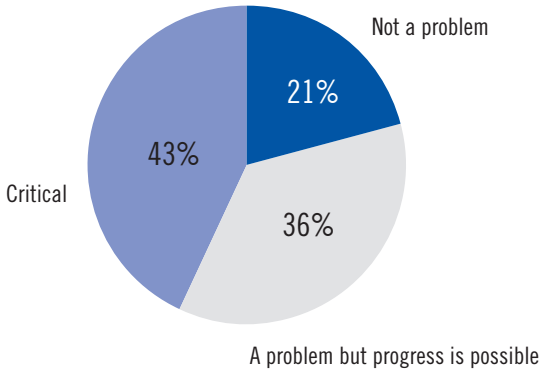
Time on Learning

Expanded time for student learning opportunities is a need frequently cited by urban superintendents, and it encompasses a wide variety of interventions. The guiding rationale for adding time to the school day or school year is as follows: All students can achieve high standards at every grade level; however, all students cannot reasonably be expected to progress at the same rates given differences in beginning achievement levels, learning style, ability, and experiences outside school. One member of the policy community echoed the sentiments of many educators in saying, "In order to overcome the extraordinary deficits our students of color have, you've got to put in extra time and work. There are no quick fixes here." African American and Hispanic students as well as special education students, low-income students, and English language learners are all on the losing end of achievement gaps with their white, Asian and regular education peers—and students in the former groups are disproportionately found in urban schools.

Education leaders cited multiple options for expanding time on learning such as: lengthening the school day or year; funding structured, academically-focused after-school and weekend programs; and holding MCAS remediation during students' free periods.[13] Others mentioned expanding students' exposure to structured educational opportunities by providing increased funding for early childhood education so that more three- and four-year-olds could gain fundamental social and preliteracy skills. Time on learning differs from the categories of technical assistance described earlier in that it primarily requires financial support rather than guidance.

SUPERINTENDENTS' MEDIAN ESTIMATE FOR THEIR INCREASED FUNDING NEEDS WAS AN ADDITIONAL 11.0%.

FIGURE 4. Superintendent assessments: Degree of budget crisis



Overarching Budget Concerns

To conclude this section on school and district needs, it is worth mentioning that several district leaders did voice concern about their overall budgets and the need for a general increase in funding, particularly because of the cuts to Chapter 70 aid, local aid and Title I aid made in recent years. Overall, they characterize the past two or three years as 'being asked to do more with less.' Given heightened expectations for performance in urban districts, it is clear that there are resource issues. However, their estimates for *how much* additional funding they needed were not as high as might be expected. The median estimate across fourteen districts was an additional 11.0%.

When principals and superintendents were asked how problematic a lack of funding was, the majority believed that it was still possible to make reform progress despite budget constraints, but almost half (43%) asserted that the budget was "such a critical problem that only minimal progress could be made".[14] Interestingly, of the four higher performing districts included as a comparison group, three superintendents stated that funding was not a problem. Their concern was that low performing districts were effectively being "rewarded for poor performance" by receiving additional state money for flat or declining test scores. All superintendents recognized that additional funding would and should be to be tied to accountability.

13. Many of these programs have operated in urban schools in the past or are currently operating with limited enrollment capacity. Superintendents and principals note that these non-core programs were hit hard by budget cuts between 2001 and 2004.

14. The question we asked was: When it comes to your budget, would you say a lack of funding: (a) a problem, but you can make progress given what you have; (b) such a critical problem only minimal progress can be made; (c) not much of a problem. Adapted from: Farkas, S. Johnson, J., and Duffet, A. (2003). Rolling up their sleeves: Superintendents and principals talk about what's needed to fix public schools. New York, NY: Public Agenda.

III. THE CURRENT STATE SYSTEM AND OBSTACLES TO CAPACITY BUILDING

It is clear that struggling schools and districts would benefit from the support of education leaders who have knowledge and skills in a variety of areas. The problem of creating that system of support and assistance is twofold:

1. It involves building on existing ideas and tools to develop a intervention system; and

2. It involves having a critical mass of people with expertise in the multiple dimensions of educational leadership to create and implement that system.

Knowledge about how to turn around chronically low performing schools or districts is quite limited both in Massachusetts and nationally. Also, there are currently very few people with experience in teaching and administration employed at the state level. Those that work in the DOE accountability and targeted assistance cluster and the EQA play the dual role of developing an intervention system (which no state in the country has done completely and for which no proven models exist) while also enacting that system in schools and districts. Other potential individuals and groups who could assist in development and implementation of intervention strategies are scattered in a diffuse network across the state, and the quality and depth of this pool of providers are unknown. In short, the state is sorely lacking the human and knowledge resources to help low performing schools and districts.

There are multiple ways to gauge the capacity of the state to fulfill its responsibilities under the law. We consider four here:

- The number of schools and districts that the state reviews and provides assistance;
- The size of the DOE staff;
- The funding of the DOE relative to the total state education budget; and
- The salary scale for state education employees.

KNOWLEDGE ABOUT TURNING AROUND CHRONICALLY UNDERPERFORMING SCHOOLS OR DISTRICTS IS LIMITED BOTH IN MASSACHUSETTS AND NATIONALLY.

By making comparisons across time, to other states and to school districts, it becomes evident that while the Legislature followed through on its commitment to provide adequate (foundation-level) funding at the local level, it did not sufficiently invest in developing the infrastructure at the state level to provide leadership throughout the system. It also did not invest sufficiently in developing the research capabilities of the state such that DOE could make evidence-based decisions about the efficacy of its programs.

Current state review and intervention capacity relative to need

The state has separate processes for review and technical assistance, and separate state entities conduct reviews at the school level and the district level. The EQA is primarily responsible for the review function and has focused its work to date on the district, rather than school level. As EQA develops capacity to conduct reviews, DOE is expected to move away from conducting school reviews and focus more on providing technical assistance to schools and to districts. To date, however, *no concrete strategy for technical assistance at the district level exists*. A summary of the three stages of the school and district review processes are as follows.

School Level

In 2004, review teams conducted sixteen panel reviews and followed those up with fact-finding reviews in the eight schools declared underperforming. The schools that entered the fact-finding process received planning assistance from DOE through the Performance Improvement Mapping (PIM) process. However, additional support to move schools from planning to action is needed. Currently, the state provides minimal technical assistance where it provides any.

It is important to compare the number of schools the state has the capacity to review to the number of schools being cited for low performance. The No Child Left Behind Act requires states to measure for Adequate Yearly Progress (AYP) on state tests at multiple grade levels and for all demographic subgroups.[15] Based on AYP calculations for performance during the 2003-04 school year, **376** schools were identified for some level of performance inadequacy, and of these, only sixteen were reviewed. Of the 376 schools identified:

- **324 schools** were labeled "In Need of Improvement" for missing performance targets two or three years in a row;[16]
- **27 schools** were moved into "Corrective Action" for missing targets four consecutive years; and
- **25 schools** were required to enter "Restructuring" for failing to meet goals five consecutive years.

With its current capacity, the DOE is effectively forced to take a triage approach to intervention in schools — focusing almost exclusively on schools in the Restructuring category. Yet, the large number of schools moving toward the most severe label suggests that taking preventative measures or earlier action with these schools is critical. Again, beyond the act of diagnosing problems through a review process, the state needs to design and implement a technical assistance process to support schools in over-

TABLE 1. Stages of school and district review process

SCHOOL (DOE)	DISTRICT (EQA)
School Performance Rating Process. Review of MCAS test scores for performance and growth. Ratings are assigned to all schools every two years.	**Tier I: MCAS and District Data Analysis.** Review of MCAS test scores for performance and growth, overall and by subgroup. Also percentage of students tested.
Panel Review. Two-day site visit by educators and DOE staff. Examination of additional documents and data including graduation and attendance rates. Decision to declare a school underperforming made after this step.	**Tier II: Document Review.** Document review and on-site observation in five domains: assessment and evaluation; curriculum and instruction; academic support services; financial management; and organizational and human resources management.
Fact-Finding. DOE-led team conducts a longer analysis that includes curriculum and leadership. School undergoes data-driven Performance Improvement Mapping (PIM) process.	**Tier III: Examination.** Extended series of interviews, observations and document analysis. Decision to declare a district underperforming is made after this step.

15. It is important to note that DOE established its own state review process prior to the advent of the federal No Child Left Behind Act's mandate that states intervene in and evaluate low performing schools and districts. State and federal expectations are not completely in alignment, as the DOE process was designed to result in a thorough process in a smaller number of schools, and NCLB mandates intervention in all schools not meeting targets.
16. Under NCLB, states set their own standards for proficiency, and Massachusetts has higher standards than most states in the country, increasing the likelihood that students and schools will have difficulty meeting the standard. Also, most schools are labeled underperforming because of the performance of a small number of subgroups, on the performance of the school overall.

coming their weaknesses.

District Level

The EQA only conducted seventeen district examinations during the 2003-04 school year, despite the fact that 132 districts were labeled "in need of improvement" for two or more consecutive years of low performance based on AYP standards. At the conclusion of the EQA examination process, the district receives a highly detailed report summarizing examiners' findings in the categories of: assessment and evaluation, curriculum and instruction, academic support services, financial management, and organizational and human resources management. Those districts declared underperforming or placed on "watch" due to a weak showing in the examination are required to submit an improvement plan and periodic documentation to ensure the plan is being enacted. However, no system of providing technical assistance to districts exists.

The Commonwealth lacks adequate capacity to work with the growing number of schools and districts that are being labeled for inadequate performance. The state has thorough systems for *diagnosing* problems at both the school and district levels, yet lacks the staff capacity to use these diagnosis tools with the number of schools and districts that could benefit from them. Further, the state has minimal ability to help troubled schools and districts both because it has not invested in developing a range of supports for struggling schools and districts, and because the small staffs at the DOE and EQA have been doing most of the work on their own. Federal law now requires that the state build its own capacity in order to remediate the schools and districts that it declares underperforming.

The size of the DOE staff

The DOE currently employs 510 employees to oversee a system of just under one million students. This number of staff has risen in the past couple of years as the federal government has taken a larger role in education and, as a result, has had to fund an increasing number of positions in state departments of education. In fact, over the past three years, the number of federally-funded positions at DOE has grown to exceed the number of state-funded positions (from a ratio of 238 state-employees/208 federal employees in FY02 to a ratio of 223 state/287 federal in FY04). That the number of state employees is shrinking is concerning because the state has less discretion over the direction of federal employees' work.

FIGURE 5. Schools identified for performance deficits versus schools reviewed

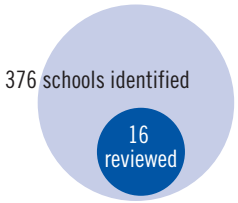
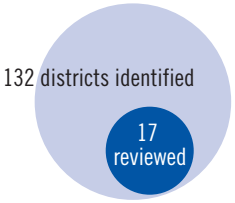


FIGURE 6. Districts identified for performance deficits versus districts reviewed



Simple comparisons of the size of the current DOE staff to (1) the size of the DOE staff in the past and to (2) the size of other education entities illustrate one way in which the state is lacking capacity to lead and support schools and districts. Consider the following:

- In 1980, prior to education reform, DOE housed 990 employees, 623 of whom were state employees.

- The Boston Public Schools, which is responsible for a more direct type of support to approximately 6.5% of students in the state, employs 548 people in administrative roles[17]—38 more people than the entire staff of DOE.

- Several states with similarly-sized student populations have in excess of 100 more state Department of Education employees than the Massachusetts DOE. As examples, Maryland, South Carolina and Wisconsin all educate slightly fewer students but have DOE staffs up to 25% larger than Massachusetts'.

THE STATE SALARY SCHEDULE IS UNIVERSALLY RECOGNIZED AS A PROBLEM IN ATTRACTING EXPERIENCED EDUCATORS TO STATE POSITIONS.

Of the DOE's 510 employees, the accountability and targeted assistance cluster only employs about three dozen staff members and that group's responsibilities extend beyond developing and implementing intervention to federal programs including Title I compliance and Reading First.

DOE funding relative to the total state education budget

One of the most notable accomplishments of the 1993 Education Reform Act has been the persistence of the legislature's commitment to ensuring that all districts are funded at 100% or more of foundation level spending. The total increase in Massachusetts state education spending rose more than 112% from 1994 to 2004 (See Table 2). Perhaps most important, state funding to poorer districts has grown at a higher rate than overall funding, improving financial equity across the system. However, as the total education budget more than doubled, spending for administration at the DOE effectively declined. Between 1994 and 2004, spending on DOE administration increased 16%.[18] Controlling for inflation, this represents a cut in real dollars available for operations and oversight at the state level.[19]

As a percentage of the total education budget in the state, the budget for DOE administration has decreased by almost half—from 0.44% of the budget in 1994 to 0.24% of the budget in 2004. By contrast, the administrative budget for the Department of Public Instruction in North Carolina, a state that serves only 300,000 more students than Massachusetts, was $31,133,000 in 2004.

TABLE 2. Massachusetts total education budget versus DOE budget

YEAR	TOTAL BUDGET	DOE ADMINISTRATION	DOE % OF TOTAL
1994	$1,837,772,790	$8,031,642	0.44%
1997	$2,580,098,052	$8,150,673	0.36%
2000	$3,606,222,658	$9,779,190	0.27%
2004	$3,903,291,016	$9,336,084	0.24%

Salary scale for state education employees

The state salary schedule is universally recognized as a problem in attracting experienced educators to state positions. The state cannot compete with the salaries paid by schools and districts to teachers and especially administrators. According to our interviews, in order to attract credible leaders, the state needs to be able to recruit those with backgrounds in school and district administration. Experienced principals and superintendents would need to take salary cuts of approximately 25- 30% to work at DOE. Consider salary data contrasting DOE positions with school and district

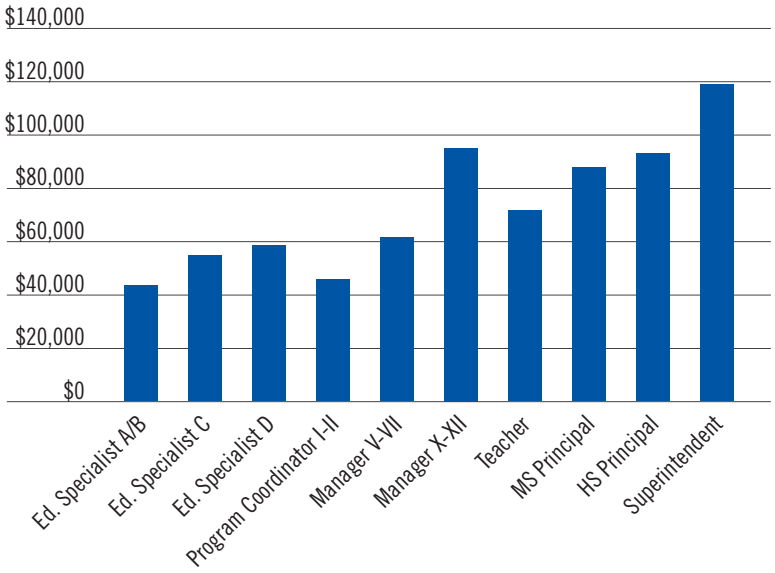
17. That figure does not include clerical or support staff, though the total number for DOE staff does.
18. Certain DOE functions are funded through separate line items in the state budget.
19. http://www.bls.gov

positions in Figure 7.[20]

Further, pay in Massachusetts lags behind other states with a similar cost of living. For example, those hired to work in school and/or district improvement in Massachusetts would likely be hired in the Education Specialist D category, which pays $50,431-$68,699 and requires five years professional experience (an advanced degree can be substituted for up to three years experience). By contrast, the Connecticut State Department of Education pays between $72,761-$90,790 for school improvement consultant positions (which require five years professional experience and an advanced degree). *Connecticut employees are paid nearly 40% more, on average, to do the same job.*

The lack of competitiveness in the salary scale ties directly into another aspect of capacity that is difficult to quantify—the quality and expertise of the DOE staff. Several educators and policy makers commented on the uneven quality of DOE staff in terms of their knowledge of schools and academic content, and hence, their ability to be helpful in resolving school-level problems. A frequent complaint from school and district staff is that many DOE staff lack teaching and administrative experience, especially recent experience. Senior administrators at DOE, especially those involved in school and district improvement, express that they actively seek experienced educators but have difficulty attracting and retaining them due to salary restrictions. Moving forward, if the expectation is that DOE transition from functioning as a compliance organization toward functioning as a service organization with greater credibility in the field, it will need to find a way to recruit a larger proportion of staff from teaching and administrative ranks.

FIGURE 7. Median annual salary of DOE employees compared to teachers and administrators (2003-04)



Summary

The state does not currently have adequate knowledge or staffing capacity to support schools and districts with their improvement efforts. In examining state capacity here, we focused on the Department of Education because this has been the organization with the greatest level of involvement over time, and because it illustrates the constraints faced by a government agency. In later sections of this report, we will explore how DOE can facilitate the growth of state capacity by working with the EQA and external partners.

THE DOE MUST OVERCOME THE PERCEPTION THAT IT LACKS THE EXPERTISE TO PROVIDE SCHOOLS WITH NEEDED SERVICES.

This section clarified some of the obstacles the state faces. In spite of these obstacles, DOE is developing tools and strategies for school and district improvement that are positive and significant. These will be elaborated in later sections.

20. The most common position at DOE is Education Specialist C. Most former teachers would be hired at that level.

IV. MODEL STATE ROLE

The previous sections of this report were intended to clarify "where we are" with respect to education reform in Massachusetts. These latter sections are designed to plot a trajectory for "where we need to go" to fulfill our commitment to all students in the Commonwealth. Whereas the earlier text, in effect, created a problem statement based on the observations of educators and policy makers in the state, we now lay out a model for the state role, making recommendations for triggering progress toward that model, and providing estimates for the costs associated with specific recommendations.

IMPROVING TEACHING AND LEARNING IS THE CORE MISSION OF THE STATE EDUCATION SYSTEM.

To this point, we have analyzed a variety of needs that are present in the current education system. The next section is devoted to considering ways the state can develop capacity to meet those needs. We begin by describing the ideal role for a state department of education in supporting school and district improvement. We clarify the elements of state involvement—some of which are already in place in Massachusetts and some of which, we argue, should be put in place.

Curriculum and professional development

The ability to provide leadership in the areas of curriculum and professional development is a central capacity the state needs because *improving teaching and learning* is the core mission of the state education system. Building the capacity to broker and deliver the services educators need to enhance their practice is pivotal in the DOE's transition from a bureaucratic, compliance-oriented organization to a service-oriented organization. The state will not be perceived as service-oriented until it is able to provide its clients (teachers and administrators) with the essential services they need most.

The state role in curriculum and professional development has four dimensions:

Leadership: DOE can use its central position and legal authority to set an agenda for the state. Yet this will require greater content expertise within the Department.

Curricular Guidance: DOE needs to become more of a resource than it has been to schools and districts by choosing curricular programs and resources.

Brokering: The key role DOE should play in the delivery of services to schools and districts is as a broker to high-quality external providers.

Limited Technical Assistance: DOE should continue to have some limited presence in the field in an explicit support role.

Assessment and data

Massachusetts has been a national leader in creating a valid, reliable and fair assessment system, though the potential obstacles in this process are considerable. The Commonwealth has made a strong investment in developing its own annual assessments aligned to the curriculum frameworks, rather than relying on the more generic assessments that many states share.[21] The test development process continues as more assessments at additional grade levels and in additional subject areas are added to comply with the No Child Left Behind Act. While the state has a strong, annual summative evaluation in the MCAS, there is more to be done to ensure that test data available to schools is use-

21. Massachusetts ranks fifth nationally in spending on assessments http://www.ecs.org/ecsmain.asp?page=/html/issuesK12.asp

ful, and that it gets used. While "data-based decision making" has become a popular idea among policy makers and education leaders, putting the concept into action in many schools and districts still requires a major cultural shift that can only occur with sustained assistance and proper tools.

The state role in assessment and data has four dimensions:

Operations: DOE is responsible for developing and administering annual assessments.

Data Gathering and Dissemination: DOE is responsible for collecting demographic and test data and communicating it to districts.

Analysis: DOE is responsible for analyzing state test and demographic data, and for helping districts conduct further analysis on their own.

Innovation: The fields of data and assessment are rapidly evolving, and DOE needs to ensure that the state is using state-of-the-art tools and analysis techniques.

Leadership

There is substantial research evidence to support the notion that school improvement hinges on strong, instructionally-focused leadership.[22] A common denominator of most failing schools and districts is weak leadership. The state has a role to play in improving the skills and knowledge of local administrators, at least in the short run. A large proportion of current administrators in Massachusetts are approaching retirement. This is an opportune time to (1) clarify what contemporary administrators need to know and be able to do; and (2) encourage and support the scale up of alternative leadership training models for new and veteran administrators, as well as for potential turnaround partners.

The state role in leadership has five dimensions:

Setting Standards: DOE is responsible for establishing the standards by which educators are trained and updating them to reflect advances in the field's understanding of the critical elements of administrative practice.

Scaling Up: DOE can help build administrative capacity in the state by scaling up innovative training models.

Brokering: DOE can locate and contract with high-quality external providers of leadership training, rather than staffing this effort internally.

Developing a Pipeline: Through innovative programs and increased visibility to the need for strong leaders, the state can help to ensure a pipeline of aspiring administrators.

Incentivizing Local Improvement: DOE can provide incentives to help schools distribute leadership and enact new labor-management practices.

In order for the state to fulfill its obligations to schools and districts in these areas, changes are necessary at DOE. We lay out our recommendations for improving state function in each of these domains in the next section. We follow that up by emphasizing that improvements in these domains require changes in the state education infrastructure and describing our recommendations for infrastructure changes.

22. Brenninkmeyer, L.D. and Spillane, J.P. (2004). Instructional leadership: How expertise and subject matter influence problem-solving strategy. San Diego, CA: Paper presented at the Annual Meeting of the American Educational Research Association.

V. PROGRAMS AND INTERVENTION STRATEGIES

Curriculum and Professional Development

Recommendation: Increase state guidance on curricular and professional development options, beginning with low performing schools.

Developing a complete, aligned set of curricular materials remains a critical deficiency of many struggling schools and districts. Central offices often do not have the staff size or expertise in multiple subject areas to take advantage of the autonomy they have in creating and selecting effective instructional materials and professional development programs. Many states, particularly larger states like Texas and California, limit districts' options regarding which texts and curricular programs they can use by holding a statewide text book adoption process. Districts may only use state funding to purchase approved materials. This process is intended to ensure that the texts and materials used in every school in the state have been thoroughly researched, are aligned to state standards, and have a track record for improving student learning.

A statewide adoption process would not be appropriate for Massachusetts, a state with a vital tradition of local control. The state can and should, however, provide guidance to districts on their textbook and professional development options. There are several ways the state can play a larger support role without sacrificing local control. For example, the DOE could:

- **Provide districts with research** on program options and program effectiveness. This is a role that many U.S. state departments of education and international education ministries play. The state could help to identify texts that are aligned to state curriculum frameworks (or rate curricula on their degree of alignment) and review the research on instructional programs so that districts could make informed choices. Similarly, the state could do more to link districts to professional development providers that have been particularly effective in a given content area.

- **Create a "default curriculum"**. For districts that are unable to develop a coherent curriculum, which includes the full range of instructional materials necessary to teach students, the DOE in conjunction with expert partners could design a "default curriculum" based on best practices from around the state. A "default curriculum" would go beyond the curriculum frameworks to include:

    - Scope and sequence,
    - Pacing guides,
    - Sample lessons for each unit,
    - Recommended texts and materials, and
    - Assessments.

Districts could opt to use this curriculum or to design their own. Maryland and Ohio have been pioneers in the development of such a curriculum at the state level.

While information, in the form of the options listed above, could be helpful to all districts, the state has a more prescriptive role to play in districts and schools that have been declared underperforming. For example, after a school has gone through the thorough state review process and its instructional program has been found to be deficient, the state needs the capacity and authority to recommend specific options for curricular reform (based on state research) and to monitor and support implementation of the new program.

Implementation

The state needs additional expert staff in the areas of curriculum and professional development.

- Expand number of DOE staff with expertise in curriculum, instruction and professional development.
- Inventory different options for curricular materials and the research on them, then provide as a resource guide to schools and districts.
- Identify high-quality professional development options in each content area.
- Investigate ways to share research on instructional programs with other states to minimize the DOE workload.
- Enlist the assistance of expert partners in the development of a "default curriculum".
- Incorporate curricular guidance into the improved technical assistance function provided by DOE and external partners.
- Prioritize funding and supports to districts with the greatest achievement gaps.

Recommendation: Increase state capacity to provide professional development, particularly in math, and strategies for special education students and English language learners in academic content areas.

The question of what students need to know and be able to do at each grade level and in each subject has been clarified since the Education Reform Act was passed in 1993. However, the issue of how to help them reach those standards remains the puzzle that is the common denominator in most low performing schools. Professional development is clearly a key to improving instruction and, ultimately, student achievement.

The Alabama Reading Initiative: Providing Direction and Getting Results[23]

More than five years ago, the Alabama State Department of Education launched the Alabama Reading Initiative (ARI). Through the initiative, the state provides guidance and brokers extensive resources to schools in exchange for their participation in an intensive literacy reform that requires culture change at the school level and instructional change across all classrooms. The initiative combines: structured curriculum using state-approved texts, extended school time dedicated to reading, frequent diagnostic assessment, and state-sponsored, ongoing coaching as professional development. Over 20,000 teachers have been trained through ARI to date.

The ARI approach is yielding improved student achievement as well as teacher satisfaction. "The original sixteen ARI schools raised proficiency rates by 8.8% over five years, compared to 3.1% for schools outside the program."[24] Teachers are highly supportive of the initiative because, although it is prescriptive in its approach, its impact on student achievement is apparent, and schools are receiving an abundance of high quality resources paired with ongoing, embedded professional development. (Most superintendents in Massachusetts reported that teachers who were participating in the federal Reading First initiative were having a similarly positive experience, despite its high level of structure.)

Massachusetts might learn from Alabama's model and the length of their experience in implementation.

23. Moscovitch, E. (2004). Evaluation of the Alabama Reading Initiative. Gloucester, MA: Cape Ann Economics.
24. Ibid, p. 3

The DOE offers summer content institutes that provide a beginning model for how the state could become more involved in ensuring that districts have high quality professional development offerings. Summer content institutes are intensive week-long experiences with follow-on work during the school year. However, their scope might be expanded in order for more teachers to participate, and their length might be expanded over two summers.

Low performing districts and schools should be required to work with DOE and other turnaround partners to develop a detailed professional development plan that includes the following critical components: (1) a plan for *ongoing* professional development that is aligned to the school's deficiencies and (2) a plan that includes *all teachers* in the school, to ensure that it is not just a select group of volunteers that are working to remediate the school's specific weaknesses. When an agreed-upon plan is established, the district and its state partners should create a budget that earmarks adequate state and local funds for the specified professional development plan.

Implementation

The state must focus on professional development as the primary means of building capacity in schools. Strategies include:

- Expand and lengthen summer content institutes and offer similar programs during the school year.
- Provide additional state-funded opportunities for ongoing professional development in specific areas of need, particularly in math, special education and strategies for English language learners.
- Link reviews of underperforming schools to a specific professional development plan.

North Carolina School Improvement Assistance Teams: An Explicit Focus on Instruction

North Carolina has one of the longest-running and most well-respected school-level intervention programs in the nation. It differs from many other states' models in its singular focus on building teacher instructional capacity. Assistance team members are hired for their specific expertise in core academic subject areas and prior experience as teachers. They undergo a month-long training process to incorporate coaching, leadership, and organizational skills with their content and pedagogical knowledge. The state supports positions for between sixty-five and eighty assistance team members per year, a minimum of four to five in each of the primary subject areas. Each low performing school is assigned a team with multiple members. Each team member works full-time in that school for one year, with follow up during a second year.

Program leaders report that the lessons they have learned in working with low performing schools reinforce their narrow focus on instruction. Those lessons include:

- Most principals in struggling schools do not know how to be instructional leaders.
- Resources are not aligned to instructional needs.
- Instructional time is not protected.
- School reform work does not have an instructional focus.
- Professional development is not coordinated and aligned to needs.

Early indications are that the program is working. North Carolina boasts that over the first five years of the program, serving an average of about forty schools per year, most all schools have come out of low performing status after working with the assistance teams, and more than 85% do not fall back after teams leave the system.

Assessment and Data

Recommendation: Support formative assessment systems for a small number of urban districts, beginning with those that have the largest achievement gaps.

The challenge that the state must take on in the next generation of assessment is helping teachers to use data to change their practice—particularly in struggling schools. Unlike many states, Massachusetts provides all teachers and administrators with the technology to review their students' test results by licensing Test Wiz software for all schools and districts. Test Wiz allows them to view and analyze the MCAS scores of the students they taught in the prior year. However, there are indications that this data analysis tool is inadequate as educators' appetite for and understanding of data grows.

As noted in the section on district needs, educators need additional data to complement what they learn from MCAS results. They need to be able to diagnose problems as they occur, not just at the end of each school year. New integrated assessment and data analysis systems are now available to provide teachers with detailed information on their current students. The best among these have several advantages over analysis based on MCAS alone.

- *Multiple test administrations.* Students can take multiple, short (approximately 25-minute) tests each year. The questions on each test are unique but similar to those a student would encounter on MCAS.

- *Immediate feedback on current students.* Tests can be scored by computer in minutes, allowing teachers to make real-time changes to lessons and student groupings.

- *Computer adaptive tests.* Whereas most standardized tests provide limited information on (1) why students at bottom of the spectrum are struggling and (2) how much students at the top end of the spectrum know, these tests are programmed to get easier or more difficult depending on the student's initial responses. At the conclusion of the test, the teacher gets more specific information on the capabilities and deficiencies of each student.

- *Vertically aligned tests.* Tests are developed for students at each grade level from early primary through high school. Tests are anchored to test the same core knowledge levels at increasing levels of difficulty so that progress can be measured over time.

- *Value-added growth measures.* Tests measure individual student growth over time, and programs are able to benchmark where students should be at the end of the year based on tests from the start of the year.

This type of system would provide a critical means of training and preparation for students who struggle on the MCAS. It would provide teachers with the information needed to help current students. Test Wiz, by contrast, does not have its own formative assessments and is, thus, limited as a diagnostic tool. The state has a role to play in ensuring that districts—especially those that have been declared underperforming or have persistent achievement gaps—have the most sophisticated tools available to diagnose and remediate problems as quickly as possible.

There are several formative assessment systems that currently operate in other states and in some individual districts in Massachusetts. These nation-

TABLE 3. Comparison of two types of data analysis software

DOES PROGRAM INCLUDE...	TEST WIZ	MEASURES OF ACADEMIC PROGRESS
Means to analyze MCAS scores?	Yes	Available by Fall 2005
Means to analyze test scores of past students?	Yes	Yes
Multiple MCAS-aligned formative assessments?	No	Yes
• Assessments that are vertically aligned across grades?	No	Yes
• Computer adaptive tests with multiple versions that can pinpoint level of highest and lowest achievers accurately?	No	Yes
Means to analyze data on current students?	Only if district uses standard formative assessment system and has entered it into Test Wiz[25]	Yes
Means to disaggregate data by individual student?	Yes	Yes
Means to conduct item analysis within each content area?	Less detailed	More detailed
Content-based, aligned professional development?	No	Yes

al programs market their ability to develop assessments aligned to the curriculum frameworks and MCAS as long as critical mass of districts enroll from a given state. One program that has begun to generate interest in Massachusetts is the *Northwest Educational Association* (NWEA) *Measures of Academic Progress* (MAP) system, which a small number of districts are using (i.e. Scituate and Lawrence) and several others are considering if they can find a way to cover the expense (i.e. Holyoke, Worcester and Brockton). Other companies with formative assessment and data packages include *ETS-Pulliam, Plato* and *NovaNet*. In addition, the Boston Public Schools has developed *My BPS*, a similar program that is specifically tailored to the local district.

Implementation

As Massachusetts moves forward in clarifying the state role in helping districts use formative assessment data, there are several next steps to consider:

- Secure additional funding for licensing of program(s).
- Evaluate available programs and select a small number of providers.
- Work with selected providers to ensure alignment with curriculum frameworks and MCAS.
- Ensure that selected districts have adequate technology infrastructure.
- Ensure that selected districts have adequate training with the assessment system and ongoing support.

25. Districts and schools can create fields to enter and analyze local (formative) assessment data using Test Wiz but very few districts have taken advantage of this capability. Part of the problem is that not all districts have a standardized formative assessment system from grade-to-grade.

- Monitor implementation in classrooms and schools.

Recommendation: Develop a value-added analysis system for Massachusetts.

By providing some schools with the ability to conduct formative assessments, the state would be improving the quality of information educators receive, thus, increasing the likelihood that educators might use what they learn from the data to change practice. There is also a way that the state can improve the utility of MCAS data for teachers and administrators. It would involve creating a system that would allow for *value-added analysis* of test scores.

Value-added analysis is a means of measuring individual students' growth over time. A value-added growth model provides data on how much one student's (or a class of students') achievement changed between, for example, the conclusion of grade three and the conclusion of grade four. In that way, value-added analysis is a more precise measure of student progress than the state's current system, which compares the scores of one cohort of fourth graders to the next cohort of fourth graders. The value-added method provides information to help educators determine whether students are gaining ground at a yearly rate that will allow them to reach proficiency, while the Commonwealth's current system cannot. Rather than providing a "snapshot in time" on a single test, value-added analysis reveals an academic growth trajectory.

Not all students begin the year with the same academic preparation and knowledge. A value-added system takes into account where students start and measures their progress from that baseline. While all students are and should be expected to reach proficiency, we must acknowledge where they begin in order to provide them with the support they need. Value-added analysis may help to identify high poverty or urban schools that are showing above-average student gains despite the fact that

Innovative Partners in Data Use and Analysis

As the state continues to develop its intervention system, it will need to intensify its efforts to find high-quality external partners to provide the specialized assistance that schools and districts need. Many low performers need help analyzing data and determining what changes to make based on the results. The market for potential support providers in this area is rapidly expanding as several high-profile names from private industry have begun to make inroads into consulting to public education systems in other states. The services of these organizations vary, but they often involve specific analysis tools, strategies for helping educators better understand and use data, and development of a data-driven school vision. For example:

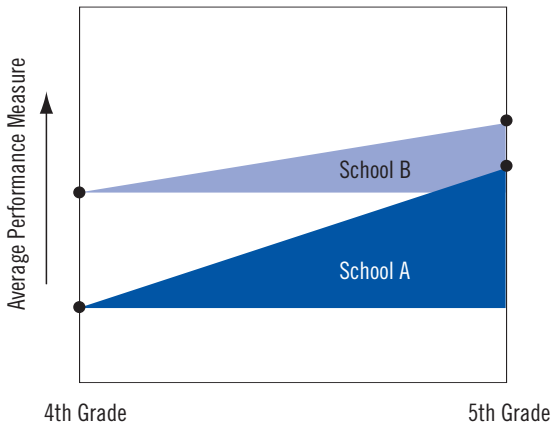
- *Standard and Poor's School Evaluation Services*, which works in Pennsylvania, New York and Michigan, has developed several data analysis tools including one that examines resource allocation in individual districts and makes predictions about achievement based on how the money is being spent.

- *IBM's Education Consulting Services* provides a range of services specifically tailored to schools and districts and has experience working in large, diverse urban areas such as Memphis, Tennessee and Charles County, Maryland.

- *McKinsey and Company* has partnered with the Minneapolis Public Schools to (1) help them develop the metrics by which the progress of their new small learning communities model would be evaluated and (2) support the analysis process.

These national-level providers tend to emphasize the value of their experience across multiple states in helping locals meet the expectations of the No Child Left Behind Act. As the Commonwealth devises a plan to scale up support to struggling schools and districts, it may be prudent to consider ways to attract newer entrants into the education field who have a strong track record in the private sector.

FIGURE 8. Value-Added Comparison of Learning Gains Over Time



Value-added analysis provides information about how students are progressing. In the example above, School A's 5th grade students are not performing at a high level as School B's 5th grade, but School A's academic growth is greater.

the school's absolute scores are not on a par with higher performing, more affluent schools. Value-added analysis is fundamentally an equity strategy.

A VALUE-ADDED SYSTEM PROVIDES INFORMATION TO HELP EDUCATORS DETERMINE WHETHER STUDENTS ARE GAINING GROUND AT A YEARLY RATE THAT WILL ALLOW THEM TO REACH PROFICIENCY.

Several states including North Carolina and Tennessee currently use value-added analysis in their accountability systems. By Spring 2006, Massachusetts plans to have developed several additional subject-area and grade-level tests as part of the MCAS battery to comply with the NCLB requirement that students in grades 3-8 be tested annually in English Language Arts and Math. This testing schedule is the necessary foundation for measuring individual student progress during a given school year.

The state has some of the infrastructure elements needed to conduct value-added analysis, but would need to upgrade the system in a couple of significant ways before full implementation would be possible. Massachusetts already assigns individual student identifiers, which make it possible for students to be tracked from grade-to-grade and school-to-school. However, data collected during one school year is not currently linked to data collected during other school years in current DOE systems. DOE is currently working to create the links that would allow queries and analysis across years and completion of this step would be essential to conduct value-added analysis. In addition, as the state develops tests at each grade level, attention must be paid to the issue of vertical integration of tests. That is, assessments need to be anchored to a core of knowledge in each subject area with established, reasonable increments of growth between grade levels. A complete overview of the elements of a value-added system and the status of these elements in Massachusetts is located in Table 4.

Value-added analysis enables better diagnosis of student needs, stronger evaluation of programs and wiser decision-making at the state, district, school and classroom levels. It is tool that the state needs in its arsenal to help better educate students and close the achievement gap.

Implementation

The development of a value-added analysis system will require the state to upgrade its data systems in multiple ways. Next steps include:

- Complete the process of creating a coordinated and linked data management system at DOE.
- Update technology hardware and software at DOE and in schools and districts, as necessary.
- Design vertically-integrated annual assessments for grades 3-8 in English Language Arts and Math.

- Improve the data analysis and auditing functions of DOE by adding a small number of staff with specialized skills.

- Appoint technical advisory panel to ensure that metrics used in the value-added system produce the most fair and accurate statistics.

Leadership

Recommendation: Sponsor urban leadership training for aspiring and current administrators, as well as for potential turnaround partners.

When asked to identify a central weakness that led to failing schools and districts, interviewees overwhelmingly focused on deficiencies among leaders. Some in the policy community expressed skepticism about the curriculum of university-based administrative preparation programs and the skills of many veteran administrators. Superintendents pointed to a dearth of qualified talent coming into the system and a need to attract potential leaders into school and district administration. There is substantial research evidence to support the notion that the school improvement process hinges on strong, instructionally-focused leadership.[26]

TABLE 4. Elements of a value-added system and their status in Massachusetts

ELEMENT	IN PLACE IN MA?	DESCRIPTION
Individual student identifiers	Yes	State assigned student identification numbers (SASIDs) are already in use in all districts.
Annual gathering of student demographic information	Yes	The state already gathers data on over 40 demographic and program variables and these are linked to students through their SASID.
Coordinated and linked data management system	Not complete	While rich data currently exists at the state level, much information is held in unconnected files that have not been linked across years or districts. The system is not yet capable of longitudinal analysis or easily tracking highly mobile students.
Annual grade-by-grade testing	Not complete	The state is currently developing additional tests and will have grade-by-grade testing from grades 3-8 by Spring 2006.
Vertically-aligned assessments	Not complete	Assessments need to be anchored to a core of knowledge in each subject area with established, reasonable increments of growth between grade levels.
Systematic appraisal of statistical system development	No	Value-added analysis is a developing tool with technical complexities. To ensure effective implementation in Massachusetts, an expert panel should be appointed to monitor system design.
Adequate data auditing	No	Enhanced data monitoring is needed to enable the state to double-check the quality of data provided by schools and districts.
Links to post-secondary data	No	Ultimately, the K-12 data system should be connected to data on enrollment and performance in state colleges and universities.

26. Elmore, R.F. (2000). Building a new structure for school leadership. Washington, D.C.: The Albert Shanker Institute; Fullan, M. (2005). Leadership and sustainability: System thinkers in action. Thousand Oaks, CA: Corwin Press.

TABLE 5. Date on certified administrators in Massachusetts BY THE NUMBERS[27]

Number of licensed school administrators in MA	3,500
Number of licensed administrators above age 58	854
Number of licensed administrators above age 62	212
Percent administrators reporting plans to retire within 5 years	34%
Percent trained who obtain employment as administrators	55%

The state Department of Education has begun to focus on improving leadership training and recruitment through a five-year, multi-million dollar grant from the Wallace Foundation. The Commonwealth School Leadership Project (CSLP) began in 2002. It has enlisted the partnership of the Massachusetts Association of School Superintendents, Massachusetts Elementary School Principals Association, Massachusetts Association of School Committees, and Massachusetts Secondary School Administrators' Association. In addition, the Springfield Public Schools' Project LEAD was awarded a companion grant for leadership development at the local level. These programs aim to create high-quality alternatives to traditional administrative training programs and generate a pipeline of aspiring administrators.

Defining the content of leadership training. The joint work of CSLP and Project LEAD in Springfield has produced a foundation of information about leadership practice in Massachusetts. Among other things, CSLP has produced a detailed profile of principal leadership (see Figures 9 and 10). And the Springfield superintendent explains their local work as "developing training modules" for what effective leaders need to know and be able to do. The CSLP web-site spells out some of the domains in which contemporary administrators are expected to have increasing levels of knowledge:

- Research on learning and literacy;
- Effective professional development;
- Community organizing and consensus building;
- Student achievement data analysis and use;
- Instruction and implementation of standards;
- Time management and organization; and
- Recruiting, developing and retaining staff.[28]

EDUCATION LEADERSHIP MUST BE CONCEIVED MORE BROADLY THAN IN THE PAST.

Further, Springfield's experience training administrators through a district-based certification program has yielded lessons about the pool of potential candidates—lessons that could have implications for what should to be taught to potential leaders in training modules. For example, potential leaders appear to have a "lack of content expertise. Leaders and aspiring leaders in secondary schools often do not have undergraduate or graduate degrees in subject areas".[29]

Defining the content of leadership training and breaking it into a small number of core components are critical steps toward improving the work of the next generation of leaders. DOE should aggressively build on the work happening in Springfield—and in other innovative programs such as the Boston Principal Fellows program and the New Leaders for New Schools program—and help bring innovative training to scale in statewide leadership institutes.

New conceptions of the population that needs

27. Commonwealth School Leadership Project: Report to Steering Committee 2003. http://www.doe.mass.edu/eq/cslp/vision.html
28. http://www.doe.mass.edu/eq/cslp/need.html
29. Commonwealth School Leadership Project: Report to Steering Committee 2003. http://www.doe.mass.edu/eq/cslp/vision.html

leadership training. The development of a modular leadership training curriculum could be used in a number of ways to improve low performing schools and districts, as was suggested by several interviewees. It is time to conceive of education leadership more broadly than in the past. It is not just those aspiring to positions as principals and superintendents that could benefit from statewide consensus on what leaders need to know and be able to do.

- *Administrators in low performing schools and districts* could be evaluated against contemporary leadership expectations and required to participate in coursework that corresponds to their areas of weakness.

- *Veteran administrators up for re-certification.* There is currently a dearth of strong professional development options for school and district administrators. Clarifying the essential skills and abilities of leaders is the first step to improving professional development options for them.

- *External education leaders* could also participate in specific modules. As the field of education expands to include a larger market for turnaround leaders who are situated outside of the school or district, this group is emerging as a different class of education leaders with knowledge needs similar to traditional administrators. Their preparation should be based on the same concepts as the training of in-house administrators.

The state should provide leadership in scaling up the availability of innovative administrative training programs and should re-define the population who should participate in leadership training.

Implementation

The state must focus on the pipeline of leaders for the future by:

- Working with leaders in local and national alternative leadership training programs to clarify training modules.

- Providing training for a greater number of current and potential leaders.

FIGURE 9. Principals' time by activity: Actual

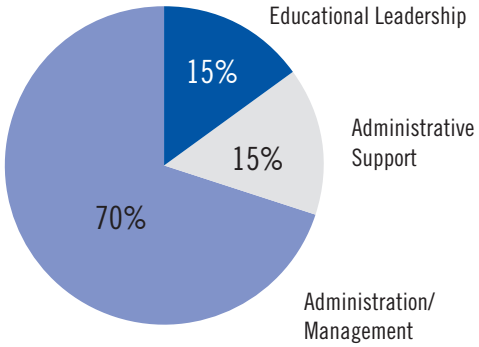
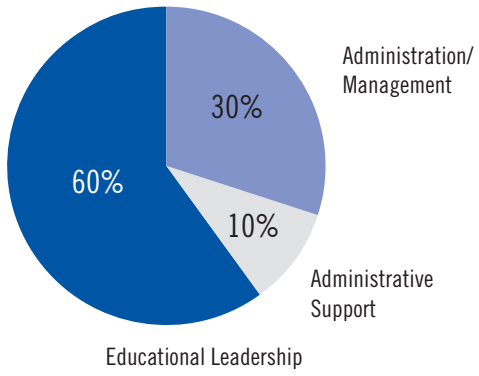


FIGURE 10.[30] Principals' time by activity: Ideal



By their own reports, principals do not spend as much time on issues of educational leadership, such as curriculum, instruction and assessment, as they believe they must to be effective at supporting teaching and learning.

30. http://www.doe.mass/edu/eq/clsp/need.html

Recommendation: Create state-level incentives to strengthen leadership at the local level.

The ultimate goal of education reform—improving students' educational opportunities and achievement—cannot be met without innovations to promote changed relationships among leaders at the local level. Teachers need opportunities to become leaders, and contracts between labor and management need to be revisited to ensure a focus on student achievement. In order to build capacity among leaders in schools and district central offices, those leaders (both union leaders and administrators) need new models for sharing authority and increasing flexibility when necessary. The following are several strategies that might be used to promote new leadership paradigms which focus greater attention on students' interests.

- *Allow school leaders full control of personnel functions.* In this age of accountability, school leaders (principals and/or leadership teams) are judged by the results produced by their staff. Teachers are the single greatest determinant of student achievement,[31] and principals need the power to hire only those that they believe will have success with their students. Principals cannot afford to get tied up in central office bureaucracies that slow the hiring process, nor can they afford to hire teachers that have been passed through to them on seniority entitlements because their students cannot afford it.

The Denver Pay-for-Performance Plan

Denver, Colorado is a large urban school district, serving mostly poor and minority students, that has developed a national model for performance-based pay. Between 1999 and 2003, the school system and the teachers' union agreed to design and pilot a model for rewarding teachers for demonstrated excellence on several types of academic indicators. A limited number of schools participated in the pilot on a voluntary basis, but beginning in Spring 2004, the entire district began system wide implementation.

During the pilot phase, different schools experimented with different reward schemes—one model was based exclusively on student standardized test scores, another based exclusively on teachers' acquisition of new skills and knowledge, and a third based on multiple teacher inputs as well as student outcomes on both standardized and local assessments. Teachers valued being included in determining how performance should be assessed and, ultimately, voted to adopt the hybrid model that factored student growth on multiple measures, teacher professional development, and teacher evaluation into a tiered pay structure. Teachers in each school set their own new student learning outcomes goals each year, and these become part of the basis for determining who earns additional pay. Qualified teachers who agree to relocate to positions in failing schools also receive a boost in compensation.

31. Wayne, A. and Youngs, P. (2003). Teacher characteristics and student achievement gains: *Review of Educational Research*, 73,1, 89-122.
32. Education Week. *Quality Counts 2004*.

- *Encourage experimentation with models for differentiating pay.* Students that enter the education system with disadvantages, such as poverty or limited English proficiency, need the highest quality teachers available. Yet, research from states across the nation shows that these students are least likely to get experienced teachers with demonstrated expertise in the subjects they teach.[32] Incentives should be aligned to the goal of attracting and retaining excellent teachers in urban schools. Options may include pay incentives for teachers:

    * Who transfer to low performing schools and/ or remain teaching in those schools for several years;

    * Who demonstrate a record of achievement with respect to student learning;

    * Who demonstrate increased knowledge and skill;

    * Who take on additional responsibilities; and

    * In hard-to-staff fields such as special education, math and science.

Building skills and leadership among *teachers* in low performing schools — and rewarding them for their effort and expertise — is a key way to address the challenge of building leadership capacity. Leadership is broader than principals and central office administrators. While individual districts and schools will most often need to tackle differentiated pay as part of the negotiation of the contract, the state can also provide incentives for districts to attempt to reform the salary schedule. The DOE could offer planning grants for districts, provide technical assistance on how to set standards for different levels of pay, and spread models for differentiation from successful districts to those interested in change.

Temporarily suspend certain collective bargaining agreements in chronically underperforming districts. There is now an active policy conversation about granting extraordinary powers to leaders and/or turnaround partners in chronically under-performing districts. Temporary exceptions on various contract personnel matters may be required to re-align school mission and staffing expertise in order to insure improved performance. Such contract exceptions would be narrowly defined and temporary in nature. Full contract provisions would be restored in response to improved performance.

VI. STRENGTHENING THE STATE EDUCATION INFRASTRUCTURE

While it would be wise for the state to focus on the three aforementioned domains as the content of its intervention strategy, there is also a need for improvement in certain elements of the state education infrastructure. Without changes in the way the state defines its role, delivers services, and pays employees, the system will continue to be inadequate for meeting the needs of schools and districts. The following section details recommended infrastructure enhancements that would build the state's capacity to provide support at the local level.

Recommendation: Develop a pool of turnaround partners.

Providing quality, in-depth technical assistance to schools and districts in a variety of substantive areas is an undertaking with a scope much larger than DOE has managed in the past. The state lacks the ability to provide remediation or prevention assistance to the large number of schools and districts that need it. DOE leaders recognize that they will need to partner with outside experts in building and executing a technical assistance system, and policy makers and educators both advocate for non-government partners to play a large role in providing assistance. (The use of external turnaround partners was a primary recommendation of the Governor's Task Force on Intervention in Underperforming Districts). However, there are fundamental questions to resolve before launching a technical assistance strategy that hinges on turnaround partners.

EDUCATION LEADERSHIP MUST BE CONCEIVED MORE BROADLY THAN IN THE PAST.

- Who are turnaround prartners?
- What will they do?
- What expertise and training do they need?
- How will they share responsibility with DOE and EQA staffs?
- What incentives will attract them to work in schools and districts?

Massachusetts is at an early stage of a complex process. No state in the nation has a proven formula for turning around low performing districts, and individual school turnaround is often unsuccessful. Developing an intervention system presents a dual set of problems: (1) figuring out the substance of the intervention process, while (2) simultaneously recruiting partners to refine and lead implementation of that process. However, until the substance of intervention is sufficiently clear, it is difficult to foresee who the appropriate partner candidates would be. We assert in this report that the three primary areas to begin to grow assistance expertise are: curriculum and professional development, assessment and data, and leadership. Within these fields, categories of potential partners emerge.

Table 6 maps the categories of potential turnaround partners and explores the advantages and disadvantages of enlisting the aid of each. Of course, the logical course of action is to draw from all of these pools of partners. Yet it is necessary to clarify who is suited for which aspects of the work, what additional training is needed for those in each category, and what incentives will appeal to the different groups.

While it is possible to identify the categories from which potential partners might be drawn, the current state of the field of "turnaround partners" is

TABLE 6. Categories of Potential Turnaround Partners

	HOW STATES USING	PRIMARY AREAS OF EXPERTISE	GREATEST ADVANTAGES	GREATEST DISADVANTAGES
Teachers on leave	Many state Departments of Education arrange temporary contracts for teachers to do auditing and assistance. Examples: KY, NC, IL	• Curriculum • Methods	• Credibility with field • Knowledge of content and methods	• Drain on K-12 schools, not likely to return to classroom • Possible lack of experience with system-level issues
Former teachers	Often, teachers on leave involved in state intervention remain and are hired full-time by the state.[33]	• Curriculum • Methods	• Credibility with field • Knowledge of content and methods	• Possible lack of experience with system-level issues
Former principals & superintendents	Principals in failing schools in CT assigned a former administrator as "critical friend".	• Leadership • Organizations • Curriculum	• Credibility with field	• Already in short supply in K-12 schools • Some retirees may not be up-to-date on current practices
DOE/EQA staff	State staff most often have larger role in auditing than assistance. Example: In NV, state conducts needs assessment then school purchases support from private provider.	• State standards and expectations • Organizations	• Legal authority • Knowledge of state standards and expectations	• Some lack field experience • Often not perceived as credible in field
University faculty/staff	A few states explicitly attempt to enlist university staff in auditing and assistance. Examples: SC, RI, LA	• Curriculum • Methods	• Deep content expertise (Schools of Arts and Sciences) • Deep methodological expertise (Schools of Education)	• Level of interest unclear • Alignment between those with methods experience and those with curricular experience unclear
Local independent consultants	Some states allow low performing districts to choose their own support provider. Examples: IN, CA	• Multiple areas	• Experience with MA schools and districts	• Variable quality and capacity
Local educational collaboratives	Many states use regional centers, a similar, though government-sponsored, model. Examples: TX, NY, PA	• Multiple areas	• Experience with MA schools and districts	• Variable capacity
Consultants from private industry (e.g. IBM, Standard and Poors)	Some states allow low performing districts to choose their own support provider. Examples: IN, CA	• Assessment and data	• National perspective • Track record of success in other fields	• Expensive • Programs may not be tailored to MA
National education reform organizations (e.g. America's Choice)	All schools in MS declared underperforming are required to contract with America's Choice for assistance.	• Multiple areas	• National perspective • Some indications of success in other states	• Expensive • Programs may not be tailored to MA

33. Blair, J. (May 30, 2001). *In KY, Master teachers find they can't go home again.* Education Week.

underdeveloped and fragmented. DOE has an open-ended Request for Response (RFR) on its web site, allowing experienced educators to apply to support the work of DOE Accountability and Targeted Assistance cluster; however, they do not systematically advertise the RFR, and it is unlikely that many in the pool of potential providers would have any way of knowing about it. NCLB and the growing number of schools and districts requiring intervention will likely continue to raise the prominence of this issue. The state, likely led by DOE, will need to define the work of turnaround partners keeping the following in mind:

- *There is no defined market for turnaround services.* Providing support to schools and districts that have been declared underperforming is an emerging market within education. An individual or group who might be interested in working, on behalf of the state, with these schools and districts would not likely know how to get involved in the work.

- *External capacity is limited.* No one knows how to effectively do comprehensive turnaround of underperforming schools and districts. People who join this work at the early stages will need to be strategic planners in designing the content of the work, as well as practitioners who can motivate teachers and administrators in the field.

- *Potential providers are not organized* in a format that is conducive to recruiting. Some in this potential pool may be national organizations with thousands of employees, but very little experience in education; some may be individual teachers who are still in classrooms. They have differing areas of expertise and may be drawn to the work for different reasons.

- *Little information exists on the quality of providers.* With the exception of anecdotal information on education consultants and reform organizations that have operated in Massachusetts for years, most potential providers will come with little evaluative information that relates directly to the job of turning around low performing schools and districts.

- *DOE and EQA staffs need to share ownership with partners.* To this point, DOE and EQA, as the entities who are legally responsible for review and intervention, have controlled development and implementation of review and intervention strategies. Turnaround partners need to be more than subcontractors who respond to the directives of government officials. They need to be partners in the design and execution of the work.

This final point about delineating the roles of turnaround partners in conjunction with the roles of the DOE and EQA staffs is an important and complicated one. Government organizations are the only ones to have legal authority on their side—and this can be a significant lever in working with a recalcitrant school or district. As such, state organizations need the capacity to lead the intervention process, set standards for hiring partners, and provide quality control. This will entail building internal knowledge and capacity within DOE, while developing the pool of partners and enlisting their guidance and ideas in the refinement of interventions services. Even if the state's role is primarily to be a broker of intervention services, there is a need for in-house knowledge and skill to be effective at brokering.

Implementation

All of the following will need to be done in conjunction with a process for clarifying the primary areas in which technical assistance will be available.

- Work to cultivate partnerships with potential providers who may not be aware of the state's intervention work.

- Conduct additional research to determine the pool of partners for Massachusetts, its size, composition, and knowledge-base.

- Create opportunities for external partners to take more responsibility for designing intervention strategies. Clarify roles for partners and DOE/ EQA staff.

- Expand DOE/ EQA assistance teams as appropriate to meet the growing need for technical assistance in low performing schools and districts.

Recommendation: Refine and improve the intervention process to make it more of a service for schools and districts.

Massachusetts has developed a solid foundation for a credible school and district intervention program. All of the research points to the need for the intervention process to begin with a needs assessment followed by a data-driven strategic planning,[34] and the Commonwealth has focused on this over the past few years. DOE has developed several tools that should remain integral elements of the state's work to supporting school improvement in the future. These are listed below, and suggestions for refining their use are included where appropriate.

- *The Performance Improvement Mapping (PIM) Process.* DOE leads schools through a ten-step, data-driven planning process to begin an improvement cycle. While this is a useful diagnostic tool, the next step needs to be to help schools move beyond planning.

- *The Compass Schools Program.* DOE locates models of exemplary school improvement and publicizes them in an attempt to spread best practices. This program could be modified to provide more specific information on discrete reform practices that a school might attempt, rather than on general examples of success. For example, the Connecticut Department of Education disseminates best practice information in twelve categories:

  * Administrator/Teacher evaluation and professional development
  * School improvement planning
  * Curriculum and curriculum development
  * Early childhood programs
  * Improving student achievement
  * Graduation requirements
  * Creating equal opportunities and reducing racial isolation
  * Teacher recruitment and retention
  * Initiatives to promote completion [of the state graduation test]
  * Technology
  * Unique graduation requirements
  * Comprehensive wellness and prevention

- *School Support Specialists.* DOE supplies large urban districts with individuals to coordinate reform efforts, support low performing schools, and broker between DOE and the district. These intermediary roles (in which individuals bridge traditional district/ state boundaries) are a promising means of providing content-specific coaching from the state. However, having one indi-

34. Laguarda, K., (2003). *State-sponsored technical assistance to low-performing schools: Strategies from nine states.* Washington, DC: Policy Studies Associates.

vidual work across the dozens of schools in a district is insufficient, particularly because the individual cannot be expected to have the multiple forms of content expertise that different schools may need. Recall that in North Carolina whole teams, with multiple forms of expertise, work in a single school.

- *The Commonwealth School Leadership Project*. As specified earlier, this work is laying the foundation for improved leadership training that could benefit low performing schools and districts.

A common critique of the intervention process is that it focuses on planning and little else at this stage. The next step is creating a menu of technical assistance options at the state level (with external providers) that can be matched to specific deficiencies in districts and schools. Just as the school improvement process needs a focus, the state needs a narrowed focus in strengthening its ability to provide technical assistance. We have defined the focus of school improvement to be 1) curriculum and professional development, 2) assessment and data, and 3) leadership. At the district level, it seems appropriate to focus on the five elements EQA has defined: 1) assessment and evaluation; 2) curriculum and instruction; 3) academic support systems; 4) financial management; and 5) organizational and human resources management.

As the state moves forward in developing technical assistance in those domains, there are process elements of the current system that are in need of improvement. Currently, reviews, particularly at the district level, are viewed more as a compliance exercise rather than a starting point of improvement. The following are lessons that should be learned from the early stages of state intervention.

- *Streamline review processes*. A number of big districts have been involved in an EQA review, several school-level reviews for low performance, and the New England Association of Schools and Colleges (NEASC) accreditation process during the same year. As one superintendent reported, "This takes tons of time away from instructional leadership." The number of unrelated reviews in which schools and districts participate needs to be minimized.

- *Integrate school and district level reviews to a greater degree*. School and district reform are interdependent processes. It is important for priorities to be aligned across administrative units and for reviews at each level to inform one another. Currently, they operate with separate tools and separate processes.

- *Make results more useful, especially at the district level*. At the conclusion of the EQA review process, districts are given data on how they performed across several dozen indicators and provided with an extensive list of improvement recommendations. Districts report that this makes it difficult to them to develop a focused vision for improvement or to discern what the state believes their priorities should be.

- *Align incentives to promote success*. Effective accountability system must have incentives for schools and districts to improve. Many states such as California and North Carolina, have supplied schools that meet or exceed performance targets with financial rewards. By contrast, in Massachusetts, urban schools and districts that consistently out-perform schools and districts with similar demographics voice frustration that large sums of unrestricted money seem to flow only to those who fail,

creating disincentives for improvement.

- *Tie increased funding to specific programs and performance expectations.* A central assertion of this report is that struggling districts and schools need more guidance in making choices that will lead to consistent improvements in student outcomes. It may take more money to improve struggling schools and districts, but it should not come in the form of unrestricted aid. Funding might better be used to support categorical grants to purchase a diagnostic data system, to expand time on learning, or to purchase the services of a state-approved turnaround partner.

As state technical assistance expands to support greater numbers of struggling schools and districts, there is much to learn from prior stages of our education reform history.

Recommendation: Strengthen and deepen staffing at DOE.

The state must pay to attract educational expertise. The current pay scale reflects the historic orientation of the state role as primarily ensuring legal compliance and conducting oversight. To attract a staff that can provide a service to those in school districts and bring about change in the culture at the DOE, the state must significantly modify the pay scale for professional educators and testing experts who come to work for the state. Candidates for those positions are in short supply, and DOE reports consistently losing them to districts. While DOE human resources personnel report that they are able to go through a several-month process to obtain clearance to increase the pay of some unique candidates, higher salaries for those specialized education expertise should be institutionalized in a revised salary schedule.

Implementation

DOE staffing must be approached in new ways including:

- Investigate ways other states are able to offer state education officials competitive salaries.
- Benchmark the salaries of certain state education positions against the salaries of administrators in school districts.
- Reduce bureaucratic hurdles that create months-long delays in processing the applications of non-typical candidates.

Recommendation: Do more to encourage regional capacity building.

In an ideal school system, the district central office provides schools the services that it would be inefficient for each school to be able to provide for itself. Under the No Child Left Behind Act and in Massachusetts' accountability system, each district is to be held accountable for conducting certain education functions for all of its schools. Those include a range of activities in domains such as data analysis, budgeting, curriculum planning, and student support services.

As noted earlier, Massachusetts is comprised of a large number of small districts with a large number of small central office staffs. Even with technical assistance from the state and its partners, it will be a considerable (possibly impossible) challenge for certain district offices to build the sustainable, in-house capacity to do all that is necessary given their current size. Superintendents of smaller districts often reported the size of the central office as a barrier to school improvement and several reported wanting guid-

ance on how to staff the central office given budget constraints and an interest in preserving positions for teachers.[35]

While no conclusive case has been made for the optimal size of the district central office, education economists have found that it is most expensive to educate students in districts with fewer than 1,000 students. Further, research on efforts to consolidate districts in other states determined that:

EVEN WITH TECHNICAL ASSISTANCE FROM THE STATE AND ITS PARTNERS, SOME SMALLER DISTRICTS WILL FACE A CONSIDERABLE CHALLENGE TO BUILD THE SUSTAINABLE, IN-HOUSE CAPACITY TO DO ALL THAT IS NECESSARY.

- New York state's decade-long district consolidation effort "substantially lowered operating costs" across the state.[36]

- Arkansas stood to save $16.7 million, 1% of total state education spending, if it consolidated small districts.[37]

Other states have tried a variety of methods to encourage regionalization of small districts. For example:

- Kansas encourages *district cooperatives* in which two districts voluntarily share specialized teachers (music, media, and foreign language), certain administrators and facilities, among other things.

- In the 1990's, Maine provided incentives to encourage districts with declining enrollments to voluntarily consolidate, and some districts took advantage.

- Maryland and West Virginia consolidated districts by aligning district boundaries to county boundaries, which reduced the number of districts in each state from several hundred to less than several dozen. (In Massachusetts, district boundaries typically coincide with city or town boundaries).

Still other states have regional or county branches of the state department of education, which conduct certain activities, such as professional development, at a larger scale and offer a network across small districts.

The need for greater regional cooperation came up repeatedly in policy maker interviews, though it clearly conflicts with the state's long-standing tradition of local control. Massachusetts may not want to return to the model of regional education service centers run by the state that operated through the early 1990's. The state should consider methods for strengthening regional services, such as:

- *Working with educational collaboratives and local education funds.* Educational collaboratives and local education funds already exist in many parts of the state and serve to connect local districts through professional development and resource sharing. The DOE might consider ways to increase their use of these intermediaries and create incentives for new collabora-

35. It should be noted that they did not suggest consolidation as a solution.

36. Picard, C.J. (2003). *Small schools and districts and economies of scale.* Paper presented to the Louisiana State board of Education.

37. Ibid.

tives to emerge in rural locations where they currently do not exist.

- *Creating incentives for districts to share services.* Districts might share services such as: personnel, programs, equipment, instructional materials, teachers, supplementary services, transportation, staff development, counseling services, special education and/or vocational education. However, they will need support and incentives to initially work out how to do so.

Implementation

Implementation of this option would not require expansion of staff at the state level and may result in significant reductions in overall education spending in time.

- Review options for aggregating capacity at a regional level and analyze the political and financial costs and benefits of each.

- Create short-term grant opportunities for districts to plan regional networking and sharing of services.

Recommendation: Create a research mechanism in the state to support and inform state-level decision-making.

As the state examines school and district performance and holds local educators accountable for results, there must be a complementary mechanism for ensuring accountability at the state level. Accountability begins with research into the policies and practices that emanate from DOE and EQA. Ongoing research into state-level activities is an inescapable requirement of a statewide accountability system. Indeed, many of the recommendations in this report necessitate that the state obtain additional knowledge before enacting new regulations or strategies.

The 1993 Education Reform Act recognized the need for research into state-sponsored policies and programs and allocated funding for the Massachusetts Education Reform Review Commission, a government organization independent of DOE. Yet, funding for the Commission was discontinued in 2002. Also, in the late 1990's, the Department of Education briefly attempted to undertake limited in-house research activity. However, DOE was never able to secure dedicated funding for building a research infrastructure, and state-level research capacity remains minimal.

Most of the departments of education around the nation that are reputed to be the most service-oriented either receive ongoing feedback from a government-sponsored education research commission situated outside DOE walls or have a research division within the state department. Some states have both research mechanisms. Research is also a primary responsibility of national ministries of education in many other countries as well as of the U.S. Department of Education. Some examples from inside the United States include:

- **Independent Research Commissions**
  - * *Florida's Council for Education Policy Research and Improvement* is a branch of the Office of Legislative Services. It provides independent analysis of topical education issues in the state and reports to the legislature.

  - * *Kentucky's Office of Education Accountability* is a subcommittee of the Legislative Research Commission. It reports to the legislature on issues such as funding, accuracy of local

data and reporting, and state functions.

* *Ohio's Legislative Office of Education Oversight* evaluates all K-12 and post-secondary education programs funded by the state.

- **Divisions of the State Department of Education**
  * Colorado's Division of Research and Data
  * North Carolina's Division of Statistical Research
  * Connecticut's Division of Evaluation and Research

It is important to note that most independent research commissions in other states report their findings directly to the legislature. In Massachusetts, it is the legislature (not the Department of Education) that decides the state's education priorities because the legislature is the entity with the final word on which programs get funded and at what level. At present, the legislature has no independent, reliable source of information on which to base those weighty decisions.

Implementation

The creation of a research function within the state need not involve much expansion of state-level bureaucracy.

- Fund an education research commission within the state.

- Recruit a small staff, whose primary responsibility will be to contract out research to independent, external partners.

VII. OTHER CONSIDERATIONS

There are several issues that came up in our research that have not been addressed to this point. These issues are central to building the conditions for continuous improvement in districts—however, they are only tangentially related to the role of state level actors in supporting schools and districts. We acknowledge the importance of these issues and the critical need to address them, though they are outside the parameters of this specific project on state capacity.

Time on Learning. As the state develops tools to intervene in low-performing schools and districts, it is critical that funding additional structured, academic time be considered as an additional tool. Struggling students need expanded opportunities to build skills and practice for the MCAS. In addition, they benefit from the availability of a safe and supportive environment outside of traditional school hours. While state staff and partners can provide professional development to improve teacher performance, expanding the school day or year is a strategy that gets directly at improving student performance.

Early Childhood Education. There has been much political movement in the field of early childhood education in the past year. This is an area Judge Botsford cited for expansion in her advisory opinion in *Hancock v. Driscoll,* and the state has begun to reorganize governance of this field as the first step in improving the state delivery system. We recognize that expanding pre-K services, particularly in low-income, urban communities, will support the ultimate goal of getting students to proficiency in the K-12 system.

Foundation Budget. Much of the plaintiff's case in *Hancock v. Driscoll* hinged on the inadequacy of funding to poor districts relative to their more affluent counterparts. Beyond this overarching concern about the level of funding, many districts have voiced concerns about how calculations are made within the nineteen individual categories that constitute the foundation budget. For example, several superintendents noted that they consistently need to allocate a greater proportion of their budget to teacher salaries and special education costs than was assumed by the foundation budget. The foundation budget should be re-evaluated to ensure equity across districts and appropriate allocations by budget category.

VII. CONCLUSION

The February 2005 Supreme Judicial Court decision in *Hancock v. Driscoll* affirmed that it is the role of the Legislature and the education policy community to keep education reform moving forward, lest the state face the threat of future litigation. Improving state supports to low performing schools and districts is the central challenge of the next phase of education reform. Our research has led us to conclude that the state needs greater capacity to provide support in three domains:

- Curriculum and professional development;
- Assessment and data; and
- Leadership.

Appendix A provides cost estimates for the major recommendations in this report. Our analysis concludes that the state could significantly address the three major intervention areas with an investment of $43.75 million. Much of the spending we propose is already allocated in the current draft of the FY06 budget, thus new funding for these programs totals $14.35 million. A summary table of the expenses for each recommendation is included in Table 7.

An adequate state role in these three domains will also require improvements in the infrastructure at DOE and EQA, as well as a concerted effort to involve external turnaround partners in planning and executing local interventions. The Legislature, which implicitly establishes the agenda for DOE and EQA by setting their budgets, must ensure an adequate investment in the state infrastructure. Education leaders from both inside and outside state government must find new ways to work together and prioritize their own capacity-building. As the number of schools and districts identified as "underperforming" grows, this is a challenge that cannot go unheeded.

TABLE 7. Estimated costs of recommendations

	CURRENTLY SPENT BY MASSACHUSETTS	COST TO THE STATE	ADDITIONAL FUNDS NEEDED
Curriculum and Professional Development			
Minimum Professional Development Spending of $125 per Pupil	Fully funded through Chapter 70 Aid	$0	$0
Intensive Professional Development for Low Performing Districts	Item not currently in state budget	$4.1 million	$4.1 million
Guidance on Curriculum	Item not currently in state budget	$4.4 million	$4.4 million
Assessment and Data			
Formative Assessment System	Item currently not part of the state budget	$2.6 million	$2.6 million
MCAS Test Development (grades 3-8 and grade 10)	Item currently included in FY06 budget at $23 million	$23 million	No more than amount in proposed budget
Value-Added Analysis System including Research and Consultants	Item currently included in FY06 budget at $4.0 million	$2.8 million	No more than amount in proposed budget
Leadership			
Leadership Training Institutes	Item currently not part of the state budget	$3.25 million	$3.25 million
Intervention by State and Partners	Item currently included in FY06 budget at $5.6 million	$3.6 million	No more than amount in proposed budget
Totals		**$43.75 million**	**$14.35 million**

APPENDIX A

Cost Estimates for Recommendations

This section discusses cost estimates for the three major sets of recommendations: professional development and curriculum; data and assessment; and leadership. It is important to note that these are only the approximated costs of the different reforms. Although the estimates are based on the budgets of similar activities in other states or in particular districts, implementation in Massachusetts could be more or less costly. Cost estimates were developed using information from a variety of sources including research reports, state budgets, and student enrollment information.

To extrapolate what the cost of a reform would be in Massachusetts, estimates are often put in a per student basis. Then, the analysis uses recent information on the size and composition of the public K-12 system and teacher labor force in Massachusetts to develop the cost estimates. The Massachusetts public school system enrolled 980,818 students and employed 72,062 teachers during the 2003-04 school year. Some of the estimates specifically target the ten lowest-performing districts. According to 2003-04 MCAS data, these districts include: Boston, Brockton, Chicopee, Fall River, Holyoke, Lawrence, Lowell, New Bedford, Springfield, and Worcester. These districts served 200,952 students and employed 14,467 teachers.

Curriculum and Professional Development

Recommendation: Increase state guidance on curriculum and professional development options, beginning with low performing schools.

The state could assist struggling districts by providing greater curricular guidance to them. Ohio provides a solid model for the costs associated with developing a model curriculum. As mandated by the Ohio Revised Code, this state is developing models to serve as exemplary guides to use by school districts in developing local courses of study and competency-based education programs. The models are being developed by committees of educators, business people, and other citizens and reflect the academic content standards in each of the disciplines. For FY05, the Ohio DOE proposed to spend $8,412,140 to develop the model curricula in the following subjects: English Language Arts ($1,076,831), Mathematics ($1,138,434), Science ($1,734,563), Social Studies ($1,888,130), Foreign Language ($812,552), Arts ($719,547), Technology ($1,042,083). This amounts to a cost of $4.64 per student for all the tests together. Translated for the number of students in Massachusetts, the total cost would be approximately $4.4 million statewide.[38]

Recommendation: Increase state capacity to provide professional development, particularly in math, and strategies for special education students and English language learners in academic content areas.

38. While the development of a standard curriculum might be a fixed cost regardless of the number of students or schools, the cost of the implementation of the curriculum is related to the size of the state and the number of districts that might take advantage of it.

Cost of professional development and curriculum recommendations

	CURRENTLY SPENT BY MASSACHUSETTS	COST TO THE STATE	ADDITIONAL FUNDS NEEDED
Minimum Professional Development Spending of $125 per Pupil	Fully funded through Chapter 70 Aid	$0	$0
Intensive Professional Development for Low Performing Districts	Item not currently in state budget	$4.1 million	$4.1 million
Guidance on Curriculum	Item not currently in state budget	$4.4 million	$4.4 million

It is difficult to compare professional development spending across states because assumptions about the need for spending on professional development are incorporated into annual general aid calculations for districts. States vary in the percent of per pupil spending that schools are expected to devote to professional development. States also vary in how much additional spending is allocated to professional development programs run out of the state department of education (and its regional offices). Because funding for professional development comes from different sources and is rarely represented in a single line item in either state or local budgets, cross-state analysis has limitations.

Foundation budget. Beginning in FY96, the Commonwealth required districts to devote a certain amount of their budgets to teacher professional development. This amount began at $25 per pupil and eventually rose to $125 per pupil. From FY00 through FY03, districts were required to spend $125 per pupil on teacher professional development. (For perspective, overall average per pupil spending in FY03 was $8273, meaning that spending on professional development was approximately 1.5% of the total district budget.) The state eliminated the expectation that districts spend $125 per pupil for FY04, removing any reference to minimum spending on professional development.

Because teacher instructional capacity is the single greatest determinant of student achievement, the state must restore clear expectations for spending on teacher professional development, reinstating the $125 per pupil minimum. This would not require additional new spending by the state, as the $125 per pupil is allocated from within the district's foundation budget. As the state recovers from the recession that made it difficult for districts to devote resources to professional development over the past few years, now is the time to reaffirm the importance of investing in professional development.

Low performing districts. Many of the districts that have had consistently weak scores on MCAS, also have a weak record of investing in professional development. In FY03, DOE-commissioned research revealed that one-third of districts were not spending the then-minimum $125 per pupil on professional development required by law.[39] Though the three biggest districts in the state—Boston, Springfield and Worcester—were spending above the minimum, most other urban and or economically disadvantaged areas scoring near the

39. School Finance: Chapter 70 Program (2003) accessed at www.finance1.doe.mass.edu/chapter70/PDS.html

bottom on MCAS — such as Lawrence, Lowell, Lynn, Fitchburg, Fall River, New Bedford, Chicopee, Southbridge and Pittsfield — were not.

Ohio has proposed a model for funding more intensive professional development in a small number of low performing districts. Their state budget includes an additional one-quarter of one percent of the foundation budget amount for professional development in a select number of districts that have the greatest achievement gaps. A similar program for Massachusetts might involve the ten lowest performing districts. These districts educate 200,952 students at an average per pupil cost of $8,232. One-quarter of one-percent of that figure is $20.58 per pupil or $4,135,592 total. Because many of these districts have not demonstrated an ability to invest in professional development, this might be money best distributed from the state if districts agree to work with specific turnaround partners on specific curricular programs and interventions, particularly in the fields of math, and content-based strategies for special education students and English language learners.

Data and Assessment

Recommendation: Support formative assessment systems for a small number of urban districts, beginning with those that have the largest achievement gaps.

The Commonwealth has several options in terms of formative assessments. The Northwest Evaluation Association (NWEA) offers the Measures of Academic Progress (MAP) assessment.[40] MAP identifies the skills and knowledge students have learned, monitors academic growth over time, and is designed to help districts, schools, and teachers make data-driven decisions. The test is adaptive, meaning that it adjusts to each student's performance level, and it is available in Reading, Language Usage, and Mathematics. MAP is taken on the computer, and so it requires a server to store student and test database information, a workstation to download and upload data to the server, and computers that may be used by the students taking the test. Estimates from NWEA suggest that the cost would be $13 per student for half of the students in the district. Training is additional.[41] With a total public school enrollment of 980,818 students in 2003-04, this would cost the state $12.75 million. If the tests were only targeted towards the lowest-performing districts, which educate 200,952 students, this would cost approximately $2.6 million.

Recommendation: Develop a value-added analysis system for Massachusetts.

Massachusetts needs a system that would support value-added analysis so that student achievement could be tracked and compared over time.[42] Such a system would need the creation of a coordinated and linked data management system, annual grade-by-grade testing with vertically-aligned tests, capacity for local school districts to enter their own data elements, enhanced data auditing function, systematic appraisal of statistical system development, and possible linkages to postsecondary

40. Two other options for assessment systems include NOVA Net, a comprehensive, online courseware system designed for grades 6 to 12, and ETS Pulliam, a company providing web-based student data management.

41. Source: Donna McCahon, Director of Strategic Partnerships, NWEA.

42. The cost analysis will not include estimates of expenses related to adjusting collective bargaining agreements in order to facilitate a greater focus on student achievement.

Cost of the Data and Assessment Recommendations

	CURRENTLY SPENT BY MASSACHUSETTS	COST TO THE STATE	ADDITIONAL FUNDS NEEDED
Formative Assessment System	Item currently not part of the state budget	$2.6 million (lowest-performing)	$2.6 million (lowest-performing)
MCAS Test Development (grades 3-8 and grade 10)	Item currently included in FY06 budget at $23 million	$23 million	No more than amount in proposed budget
Value-Added Analysis System including Research and Consultants	Item currently included in FY06 budget at $4.0 million	$2.8 million	No more than amount in proposed budget

data.[43] The current FY06 budget has funds allocated to develop all of the state and federally required tests for grades three to eight and high school. These funds will come from the state appropriation proposed by the governor ($23 million) and federal Title VI funds.[44] However, more support would be needed to create the data management and analysis infrastructure.[45]

As with the discussion of possible professional development models, examples from other states are helpful when considering Massachusetts' options. Caroline Hoxby provides a detailed analysis of the cost of accountability systems in a number of states. Her research shows that during FY01, states spent anywhere from $1.79 to $34.02 per public school student in their state. Massachusetts was calculated to spend $20.47 per student.

Part of the variation in spending across states is due to the fact that states differ in the types of information they collect, and whether and how students are tracked.[46] Texas, a state that uses a value-added system to track students and is reputed for having a comprehensive data analysis system, might serve as an exemplar for Massachusetts. According to Hoxby (2002), the Texas Education Agency has the most developed database system in the country for tracking student achievement. There is longitudinal information on each student, and students can be tracked across the state. The data are used to evaluate schools and are available in numerous public reports including the school report cards. Schools also receive reports for good performance. Hoxby found that Texas devoted $2.80 per student to the operations of the accountability system at the Texas Education Agency, including administration, computers, and consultants. If such costs are applied to the number of public school students in Massachusetts, such a reform would add up to $2.7 million a year. The current proposed FY06 budget includes $4.0 million for the creation of a

43. Source: Reville, P., P. Noyce, and J. Candon (2004). *Gaining Ground: Value-Added Analysis for Massachusetts.* Boston, MA: Rennie Center for Education Research & Policy at MassINC.

44. Source: Jeffrey Nellhaus, State Director of Standards, Massachusetts Department of Education. Personal communication, February 18, 2005.

45. Massachusetts has devoted funds to research in the past. The budget for the Massachusetts Education Reform Review Commission, the research arm that operated in the state between 1998-2001, fluctuated between $100,000 and $300,000 per fiscal year. However, researchers note that this is an insufficient sum of money sum of money and other states spend much more.

46. Another source of variation, of course, is the number of different subjects and grade levels in which state assessments are administered.

value-added analysis system for Massachusetts. This level of funding appears to be adequate for the start-up phase, though some level of continued funding for maintenance would be needed over time.

Leadership

Recommendation: Strengthen urban leadership training for aspiring and current administrators, as well as for potential turnaround partners.

Leadership is crucial in order to improve student achievement, and the state should help bring innovations in the training of new administrators to scale. One model of innovative leadership training is the Boston Principal Fellows program. Supported by the Broad Foundation and U.S. Department of Education, this program is guided by six essential concepts related to whole school improvement. In partnership with the University of Massachusetts, the Fellows program provides an intensive 12-month experience that integrates theory and practice. Furthermore, after beginning a principal or assistant principal position, participants receive two years of support through the principal support system of the School Leadership Institute. Fellows are paid a full salary to during their residency in the Boston Public Schools and participate in coursework (valued at $60,000 per person) free of charge. In addition, participants may receive a master's degree or certificate in advanced graduate studies from the University of Massachusetts – Boston at a cost to them of $4,000.

A second possible model is the New Leaders for New Schools (NLNS) program. The program combines an intensive summer training institute focused on management and instructional leadership strategies and a yearlong, full-time residency with an exemplary principal. Nearly one hundred fellows have come through the program from districts in New York, Chicago, Washington, D.C., Memphis, and Oakland. Similar to the cost of the Boston Principal Fellows program, NLNS costs $65,000 per participant for coursework plus a paid full-time residency (within the district salary schedule).[47]

Finally, the Springfield School District presents a third good model that Massachusetts may want to replicate statewide. With the support from the Wallace Foundation, the district established the Springfield Project Leadership for Educational Achievement in Districts (LEAD). The goals of the program are to: develop instructional leadership throughout the district by improving the screening of prospective candidates; increase the number of minority candidates through a two-year, regional, district-based certification program for aspiring principals; strengthen the abilities of principals and superintendents through comprehensive, sustained professional development; and create new organizational learning arrangements and intermediary leadership opportunities. Under this program, Springfield became the first district in the Commonwealth to create and manage its own principal certification program independent of a university. The Springfield district has received $1,085,000 per year (renewable for a total of five years) from the Wallace Foundation to run the program. In 2004, there were 32 participants in the cohort expected to complete two years of training. Additionally, there were eight participants completing leadership models, graduate level courses, seminars, and other professional development activities. Therefore, the costs of the program for the intensive licensure program appear to be in

47. U.S. Department of Education, Office of Innovation and Improvement, *Innovations in Education: Innovative Pathways to School Leadership,* Washington, D.C., 2004.

Cost of the Leadership Recommendations

	CURRENTLY SPENT BY MASSACHUSETTS	COST TO THE STATE	ADDITIONAL FUNDS NEEDED
Leadership Training Institutes	Item currently not part of the state budget	$3.25 million	$3.25 million
Intervention by State and Partners	Item currently included in FY06 budget at $5.6 million	$3.4–3.6 million	No more than amount in proposed budget

line with the Boston Principal Fellows program and NLNS.

Establishing a statewide leadership program in Massachusetts would likely cost $65,000 per participant. Assuming that the state might train fifty people a year, the approximate cost of this type of institute would be $3.25 million.

Intervention and Turnaround Partners. The Massachusetts Department of Education estimates that it costs between $150,000 and $300,000 annually to do a school intervention and between $300,000 and $800,000 annually to do a district intervention (depending on the nature of deficits and quality of leadership). The research literature provides additional examples of intervention programs and technical assistance provided to low performing schools. These approaches vary from using consultants, liaisons, or brokers; relying on school assistance teams; giving special grants to support school improvement; and allowing low-performing schools access to the services of regional educational agencies and statewide professional development resources. The cost of these state-sponsored interventions depends on the intensity of the services, and staff and consultant time accounts for the largest share of expenditures.

In North Carolina, the Department of Public Instruction assigns School Based Management Teams (SBMTs), which are comprised of four-to-five experienced educators including a principal, to work on a daily basis in low performing schools. The teams begin with a needs assessment and then proceed to target support. Members of the SBMTs, assistance teams and educational consultants who provide technical help to low-performing and at-risk schools in the state, along with individual principals, write the school improvement plans. SBMTs engage in activities such as setting up demonstration lessons for teachers, aiding in budget adjustments and establishing plans for reducing class size or implementing teacher mentoring. In 2002–03, the state spent $5.7 million on school assistance teams. They were in seven schools on a required basis. Moreover, assistance was given to 45 schools on a voluntary basis from off-site school teams. North Carolina serves approximately 38% more students, so adjusting the budget downward suggests that such a program would cost Massachusetts about $3.6 million.

In California, schools in their first year of the Immediate Intervention/Underperforming Schools Program (II/USP) perform an extensive needs assessment and develop a school improvement plan under the guidance of an external evaluator. The state awarded planning grants with a minimum of $50,000 to 353 low-performing schools, which schools used to hire external evaluators and to support other improvement activities. However,

	CURRENTLY SPENT BY MASSACHUSETTS	COST TO THE STATE	ADDITIONAL FUNDS NEEDED
Curriculum and Professional Development			
Minimum Professional Development Spending of $125 per Pupil	Fully funded through Chapter 70 Aid	$0	$0
Intensive Professional Development for Low Performing Districts	Item not currently in state budget	$4.1 million	$4.1 million
Guidance on Curriculum	Item not currently in state budget	$4.4 million	$4.4 million
Assessment and Data			
Formative Assessment System	Item currently not part of the state budget	$2.6 million	$2.6 million
MCAS Test Development (grades 3-8 and grade 10)	Item currently included in FY06 budget at $23 million	$23 million	No more than amount in proposed budget
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Intervention by State and Partners	Item currently included in FY06 budget at $5.6 million	$3.6 million	No more than amount in proposed budget
Totals		**$43.75 million**	**$14.35 million**

schools with higher enrollments received up to $168 per student.[48] If this maximum amount were spent on the ten lowest-performing districts, this would cost Massachusetts about $3.4 million, very similar to the amount suggested by the North Carolina program.

Summary and Conclusions

The table above summarizes the range of costs associated with the recommendations related to professional development and curriculum, data and assessment, and leadership. All estimates for activities vary depending the model chosen. Our analysis concludes that the state could significantly address the three major intervention areas with an investment of $43.75 million. Much of the

48. Laguarda, Katrina G. (2003) State-Sponsored Technical Assistance to Low-Performing Schools: Strategies from Nine States. Washington, D.C.: Policy Studies Associates, Inc. Prepared for the annual meeting of the American Education Research Association, April 21-25, 2003, Chicago, Illinois.

spending we propose is already allocated in the current draft of the FY06 budget, thus new funding for these programs totals $14.35 million.

Increasing the capacity of the Commonwealth to address the needs of low-performing schools and districts is certainly of great importance. Moreover, the expenses associated with these recommendations pale in comparison to the costs of having a failing educational system. Dropouts and unskilled workers are much more likely to be unemployed, dependent on government support programs such as welfare and food stamps, and engaged in illegal pursuits. The costs of these activities over the course of lifetime are far greater than the investments that can be made in schools and students.

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